

# Panasonic®

## Multimedia Projection Display Operating Instructions

Models No. **PT-43LC14/PT-50LC14/PT-60LC14**



MultiMediaCard™



**(USA)**

For assistance, please call :  
**1-888-VIEW PTV(843-9788)**  
or, contact us via the web at:  
<http://www.panasonic.com/contactinfo>

**(Puerto Rico)**

For assistance, please call :  
**787-750-4300**  
or visit us at [www.panasonicpr.com](http://www.panasonicpr.com)

### Three Important Reasons to Register Your Product Immediately!

- 1 Protect Your New Investment...**  
Register your new projection display for insurance purposes in case your new projection display is stolen.
- 2 Product safety notification...**  
Registering your product can help us to contact you in the unlikely event a safety notification is required under the Consumer Product Safety Act.
- 3 Improved Product Development...**  
Help us continue to design products that meet your needs.  
Register online at [www.panasonic.com/register](http://www.panasonic.com/register)



As an **ENERGY STAR®** Partner, Matsushita Electric Corporation of America has determined that this product or product model meets the **ENERGY STAR®** guidelines for energy efficiency.

This operating instruction book is designed for use with models PT-43LC14, PT-50LC14 and PT-60LC14. Illustrations in this manual show the PT-50LC14.

Before connecting, operating or adjusting this product, please read the instructions completely. Please keep this manual for future reference.

# IMPORTANT SAFETY INSTRUCTIONS



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.



The pictorial representation of a hot surface within a triangle is intended to tell the user that parts inside the product are a risk of burns to persons.

## Note to CATV System Installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

## WARNING

- To reduce the risk of electric shock, fire, injury to persons or damage to this product:

- 1) **Read these instructions** before using, connecting or adjusting this product.
- 2) **Keep these instructions** for future reference.
- 3) **Heed all warnings** on the product and in this Operating Instructions manual.
- 4) **Follow all instructions** carefully.
- 5) **Do not use this product near water.** For example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement or near a swimming pool, and the like. **Do not** place objects filled with water, such as a vase or the like, on top of this unit.
- 6) **Clean only with a dry cloth.** Do not use liquid cleaners or aerosol cleaners.
- 7) **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** Openings in the cabinet are provided for ventilation to ensure reliable operation and to protect it from overheating. Never block openings by placing the product on a bed, sofa or similar surfaces.
- 8) **Do not install near any heat source such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produces heat. Do not** install in a built-in installation such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 9) **Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.**
- 10) **Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.**
- 11) **Use only attachments/accessories specified by the manufacturer.**
- 12) **Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.**
- 13) **Unplug this apparatus during lightning storms or when unused for long periods of time.**
- 14) **Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.**
- 15) **Because the temperature of the lamp unit is elevated immediately after its use, a direct touch to it may cause burns. Replace the lamp unit only after it has cooled.**



# ⚠ IMPORTANT SAFETY INSTRUCTIONS (CONTINUED)

## ⚠ WARNING

AS WITH ANY SMALL OBJECT, SD CARDS CAN BE SWALLOWED BY YOUNG CHILDREN. DO NOT ALLOW CHILDREN TO HANDLE THE SD CARD.

## ⚠ CAUTION

- (1) This projection display is intended to be used with the following TV stand: model TY-43LC14C for the PT-43LC14, TY-50LC14C for the PT-50LC14, and TY60LC14C for the PT-60LC14. Use with other stands may result in the projection display becoming unstable, possibly causing injury.
- (2) This projection display should not be exposed to direct sunlight, extreme temperatures or moisture, as this can result in serious irreparable damage.
- (3) This product has a High Intensity Discharge (HID) lamp that contains a small amount of mercury. It also contains lead in some components.  
Disposal of these materials may be regulated in your community due to environmental considerations.  
For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance:  
<<http://www.eiae.org>.>

The Lamp is a consumable item and has a life.

The lamp should be changed as soon as possible once the lamp warning message appears. (See page 73.)

If the lamp is damaged, please contact your nearest dealer.

Due to the characteristics and use conditions of individual lamps, the lamp may cease to light before the stated lamp life.

Influences of frequent lighting, continuous light use for over 24 hours, the number of times lit, the length of time between lightings, etc. may shorten lamp life.

(Because of this, we recommend having a replacement lamp on hand.)

## Trademarks

- VGA and XGA are trademarks of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Computer, USA.
- VESA and SVGA are trademarks of the Video Electronics Standard Association.  
Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.
- Equipped with **dbx**®-TV Noise Reduction for true MTS reproduction. **dbx**®-TV Noise Reduction is required for good stereo separation and audio fidelity. **dbx**® is a registered trademark, and is licensed by **dbx**® Technology Licensing.



SD Logo is a trademark.



Manufactured under license from BBE Sound, Inc.  
Licensed by BBE Sound, Inc. under USP4638258, 4482866, 5510752 and 5736897. BBE and BBE symbol are registered trademarks of BBE Sound, Inc.



HDMI, the HDMI logo and High Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

# Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new projection display.

To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.

Retain your purchase receipt also, and record the serial number of your set in the space provided on the rear cover of these instructions.

Visit our Panasonic Web Site for USA : [www.panasonic.com](http://www.panasonic.com)

## (USA)

For assistance, please call : 1-888-VIEW PTV(843-9788)  
or, contact us via the web at: <http://www.panasonic.com/contactinfo>

## (Puerto Rico)

For assistance, please call : 787-750-4300  
or visit us at [www.panasonicpr.com](http://www.panasonicpr.com)

## FCC STATEMENT:

### NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

## FCC CAUTION:

To assure continued compliance and prevent undesirable interference, use only the provided shielded RGB cable with 2 ferrite cores while connecting the projection display to a computer. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

### Declaration of Conformity

Models Number: PT-43LC14/PT-50LC14/PT-60LC14  
Trade Name: Panasonic  
Responsible party: Matsushita Electric Corporation of America.  
Address: One Panasonic Way Secaucus New Jersey 07094  
Telephone number: 1-888-VIEW PTV(843-9788)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

# Table of Contents

## To Start !

▲ IMPORTANT SAFETY INSTRUCTIONS .....	2
Dear Panasonic Customer .....	4
Before Using .....	6
Location of Controls .....	8
Installation .....	12

## Getting Started

## Use Now !

Power ON and OFF .....	22
Basic Menu Navigation .....	24
Tuning channels .....	26
Projection display operation .....	30
Searching for the desired channel (Channel search) .....	34
Playing peripheral equipment .....	35
Mute / Freeze / SAP .....	36
Split screen .....	38

## Basic Operation

## Enjoy More !

Adjusting screen position and size .....	40
Audio Adjustments .....	42
Picture Adjustments .....	44
Lock Feature .....	46
Closed Captions .....	50
Input Label .....	52
Channel Caption Feature .....	53
Weak Signal Display Feature .....	54
Color Temp Feature .....	55
RGB Level Feature (RGB input only) .....	56
Video NR (Noise Reduction) Feature .....	57
Automatically changing screen size .....	58
Setting when 480p signals are input through COMPONENT VIDEO INPUT .....	59
RGB Input Feature .....	60
3D Y/C Feature .....	61
3D IP Feature .....	62
GAMMA Adjust Feature .....	63
Black Extension Feature .....	64
Color Correct Feature .....	65
Sleep Timer Feature .....	66
Switching languages for display .....	67
Photo Viewer (SD Card/PC Card) .....	68

## Advanced Operation

## Other Information !

Replacing the lamp unit .....	73
Warning Indicators .....	74
Remote Control Quick Reference Guide (Operating peripheral equipment) .....	75
Troubleshooting .....	82
Specifications .....	83
Cleaning .....	84
Customer Services Directory .....	84
Limited Warranty .....	85
Index .....	87

## Information

# Before Using

## Receiver Location

This projection display is intended to be used with an optional stand or entertainment center. Consult your dealer for available options.

Locate for comfortable viewing. Avoid placing where sunlight or other bright light (including reflections) will fall on the screen.

Use of some types of fluorescent lighting can reduce remote control transmitter range.

Adequate ventilation is essential to prevent internal component failure. Keep away from areas of excessive heat or moisture.

## Optional External Equipment

The Video / Audio connection between components can be made with shielded video and audio cables. For best performance, video cables should utilize 75  $\Omega$  coaxial shielded cables. Cables are available from your dealer or electronic supply house.

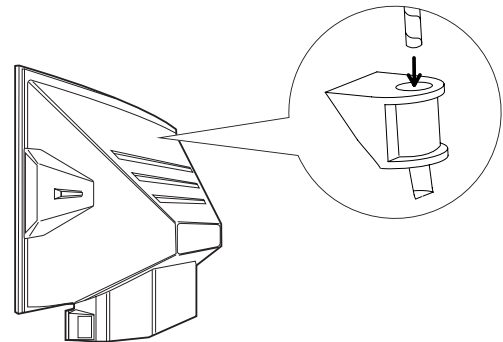
Before you purchase any cables, be sure you know what type of output and input connectors your various components require. Also determine the length of cable you'll need.

## Safety Precaution

Please take safety precautions to prevent the unit from falling over.

### WARNING

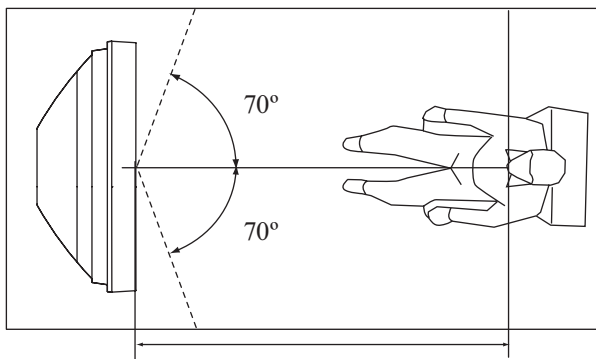
The unit may tip or fall if not situated on a stable surface, if pushed or during an earthquake. Use a strong rope or chain (not included) to fasten the projection display firmly to a strong wall support.



## Viewing position

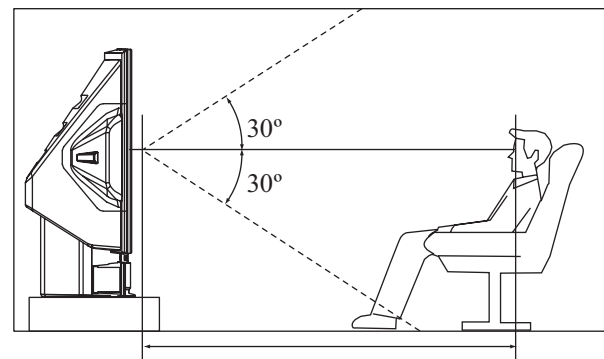
To optimize your viewing comfort, please follow the viewing guidelines shown in the diagrams below. If viewing for an extended period of time, sit as far back from the screen as possible.

<Top view>



At least 1.6 m (PT-43LC14) / 1.8 m (PT-50LC14) /  
2.2 m (PT-60LC14).

<Side view>



At least 1.6 m (PT-43LC14) / 1.8 m (PT-50LC14) /  
2.2 m (PT-60LC14).

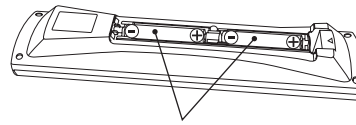
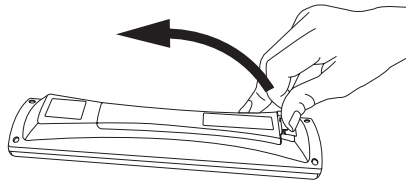
## Accessories

1. Remote Control (EUR7627Z20)
2. Batteries 2 "AA"
3. RGB Cable (2 m) (LSJA0239-1 or LSJA0443)

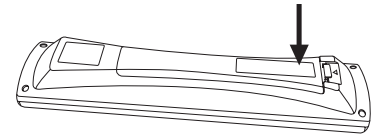
## Remote Control Battery Installation

Requires two AA batteries (supplied).

1. While pressing in on the catch, open cover in direction of arrow.
2. Install the batteries as shown in the battery compartment. (Polarity + or - must match the markings in the compartment).
3. Press cover in direction of arrow until it snaps shut.



Two AA size



### ⚠ CAUTION

Incorrect battery installation can cause the batteries to leak, leading to personal injury and/or damage to the remote control.

**Observe the following precautions:**

1. Batteries should always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not mix battery types (example: "Zinc Carbon" with "Alkaline").
3. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
4. Battery replacement is necessary when the remote control acts sporadically or stops operating the projection display set.

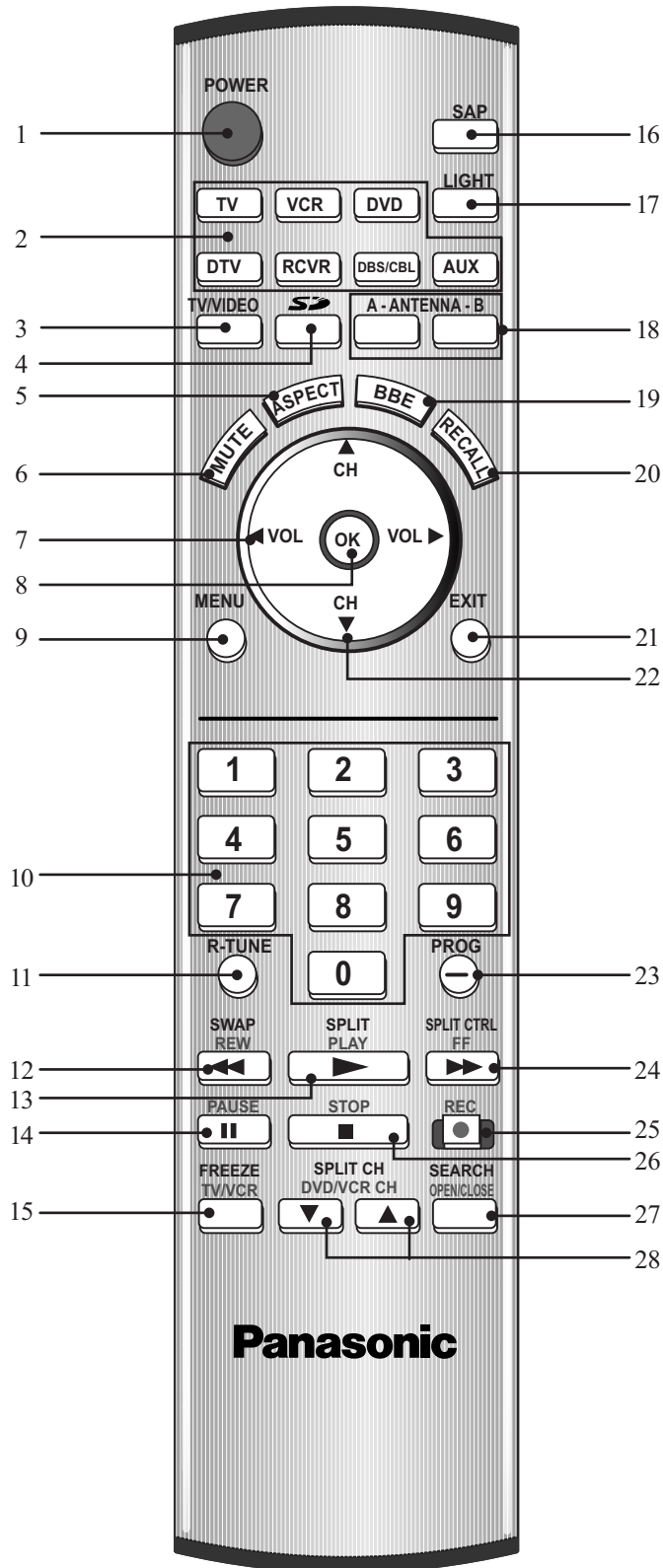
### Helpful Hints:

- (1) For frequent remote control users, replace old batteries with Alkaline batteries for longer battery life.
- (2) Whenever you remove the batteries, **you may need to reset the remote control infrared codes**. We recommend that you record the code on page 76, prior to setting up the remote.



# Location of Controls

## Illuminated Remote Control



### Note:

- This section describes TV mode only. For other modes, see pages 75-81.



## Location of Controls

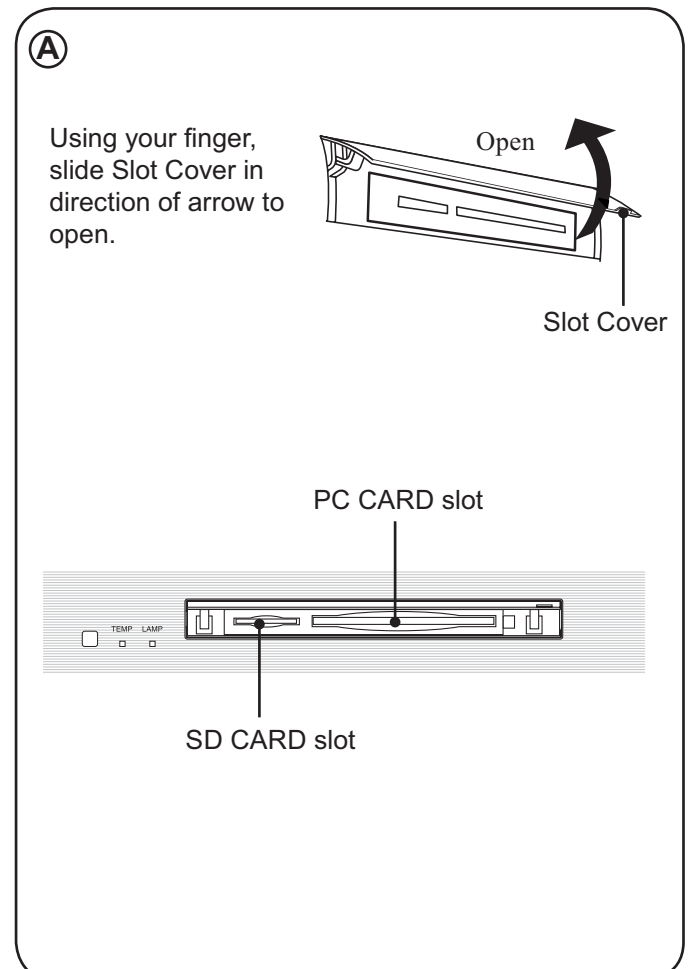
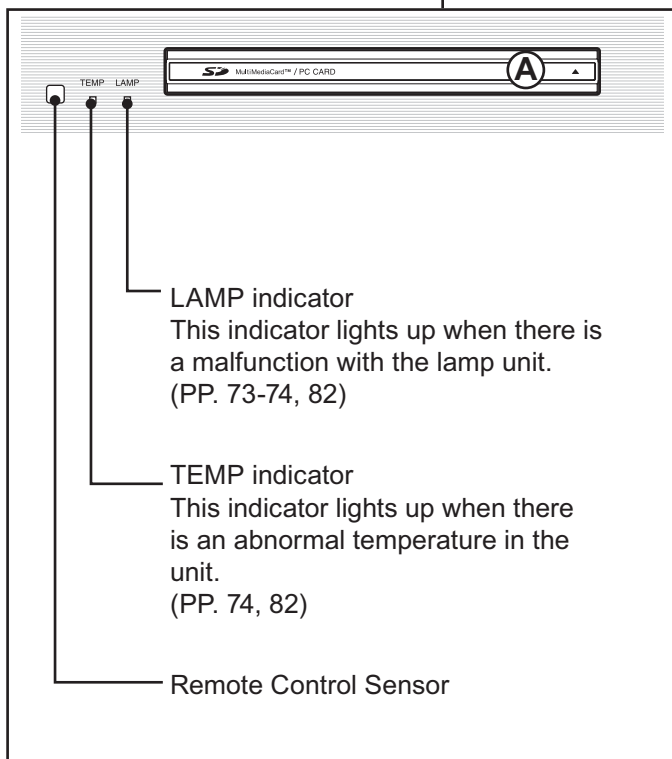
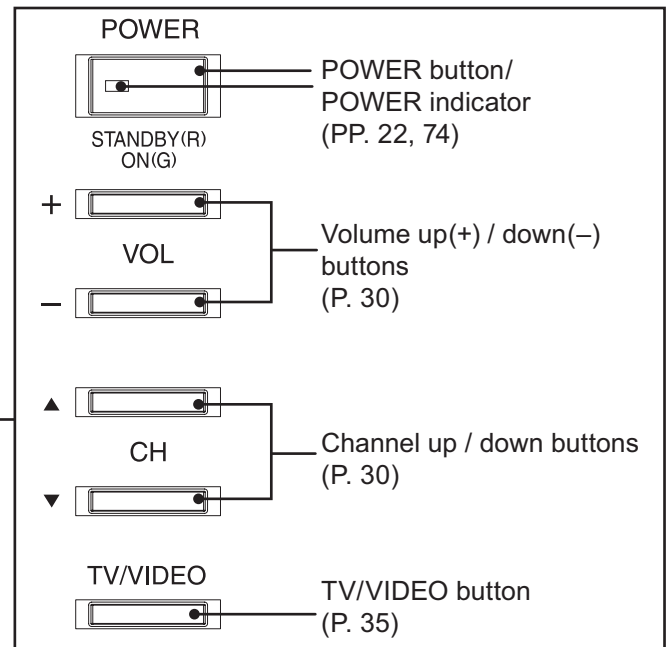
	Remote Keys	DESCRIPTION
1	<b>POWER</b>	Press to turn ON and OFF.
	<b>TV</b>	Sets the remote to communicate with television.
2	<b>VCR, DVD, DTV, RCVR, DBS/CBL, AUX</b>	Sets the remote to communicate with other devices.
3	<b>TV/VIDEO</b>	Changes Input source.
4	<b>SD</b>	Accesses the Photo Viewer feature (SD Card or PC Card).
5	<b>ASPECT</b>	Changes display aspect ratio.
6	<b>MUTE</b>	Press to mute sound.
7	<b>VOL ◀▶</b>	Press to adjust TV sound and navigate in menus.
8	<b>OK</b>	Press to choose menu and sub-menu entry.
9	<b>MENU</b>	Press to display Main Menu or return one step backward in menus.
10	<b>Number</b>	Press numeric keypad to select any channel or press to enter alphanumeric input in menus.
11	<b>R-TUNE</b>	Press to switch to previously viewed channel, Photo Viewer or input modes.
12	<b>SWAP</b>	Press to swap Main screen with Split screen.
	<b>REW</b>	While remote is in VCR or DVD mode, press to rewind.
13	<b>SPLIT</b>	Press to display or delete Split screen.
	<b>PLAY</b>	While remote is in VCR or DVD mode, press to play.
14	<b>PAUSE</b>	While remote is in VCR or DVD mode, press to pause.
15	<b>FREEZE</b>	Still full video window.
	<b>TV/VCR</b>	Press to switch to TV or VCR.
16	<b>SAP</b>	Changes the audio mode.
17	<b>LIGHT</b>	Lights all buttons. The selected mode button (TV, VCR, etc.) flashes.
18	<b>ANTENNA A/B</b>	Changes the antenna input of an external device.
19	<b>BBE</b>	Toggles between BBE, BBE VIVA, and OFF.
20	<b>RECALL</b>	Press to display or delete current TV status information.
21	<b>EXIT</b>	Press to exit menus.
22	<b>CH ▲▼</b>	Press to change channels and navigate in menus.
23	<b>PROG</b>	Press when entering channels of an external device.
24	<b>SPLIT CTRL</b>	Press when operating an external device.
	<b>FF</b>	While remote is in VCR or DVD mode, press to fast forward.
25	<b>REC</b>	While remote is in VCR mode, press to record.
26	<b>STOP</b>	While remote is in VCR or DVD mode, press to stop.
27	<b>SEARCH</b>	While remote is in TV mode, press to scan available channels in search screens. Press again to delete search screens.
	<b>OPEN/CLOSE</b>	While remote is in DVD mode, press to open or close DVD tray.
28	<b>SPLIT CH ▲▼</b>	While remote is in TV mode, press to change channels for SPLIT.
	<b>DVD/VCR CH</b>	While remote is in VCR or DVD mode, press to change channels for DVD or VCR.

## Location of Controls

### Controls and Terminals on the projection display

Model PT-50LC14 unit shown

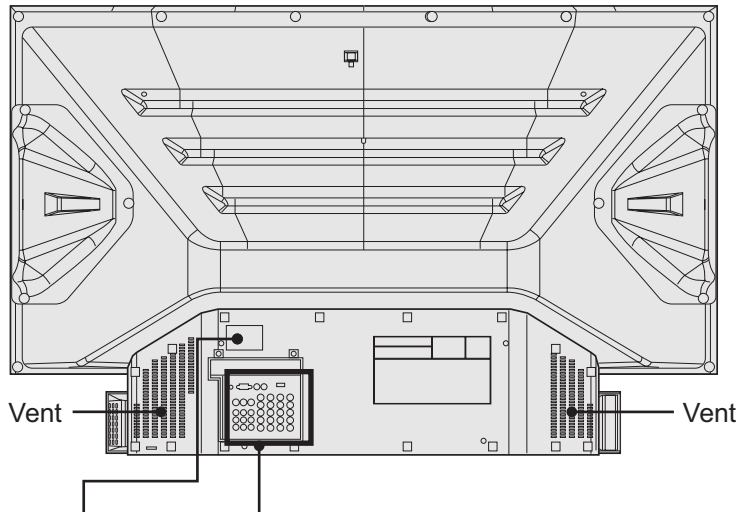
< FRONT >



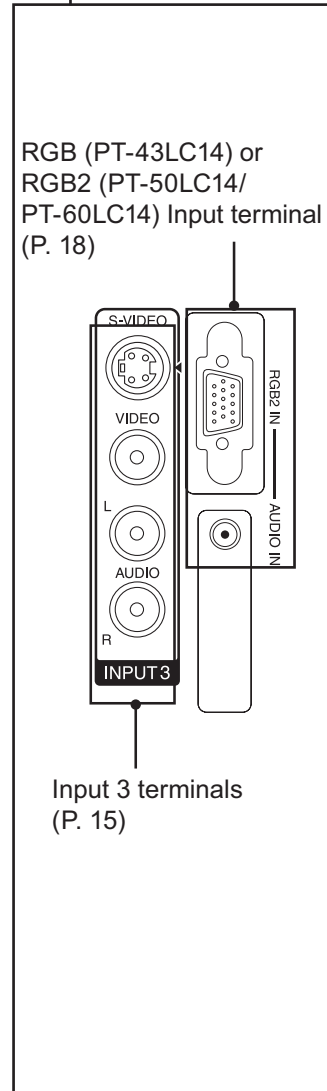
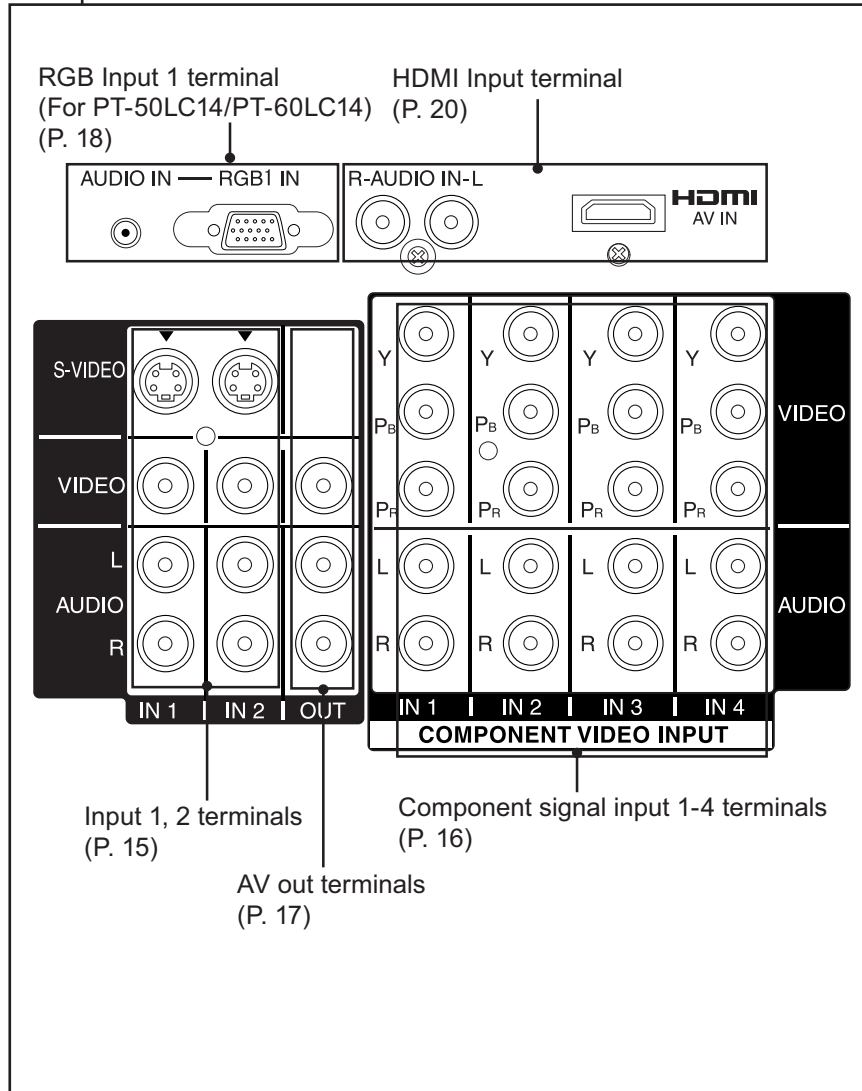
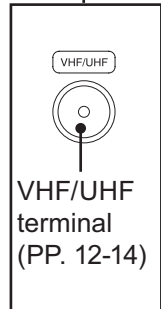
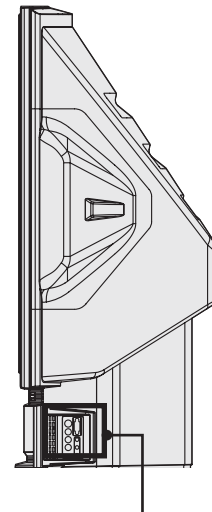
# Location of Controls

## Model PT-50LC14 unit shown

< REAR >



< SIDE >



### Note:

- Make sure the vents are not blocked. (This could cause damage.)

# Installation

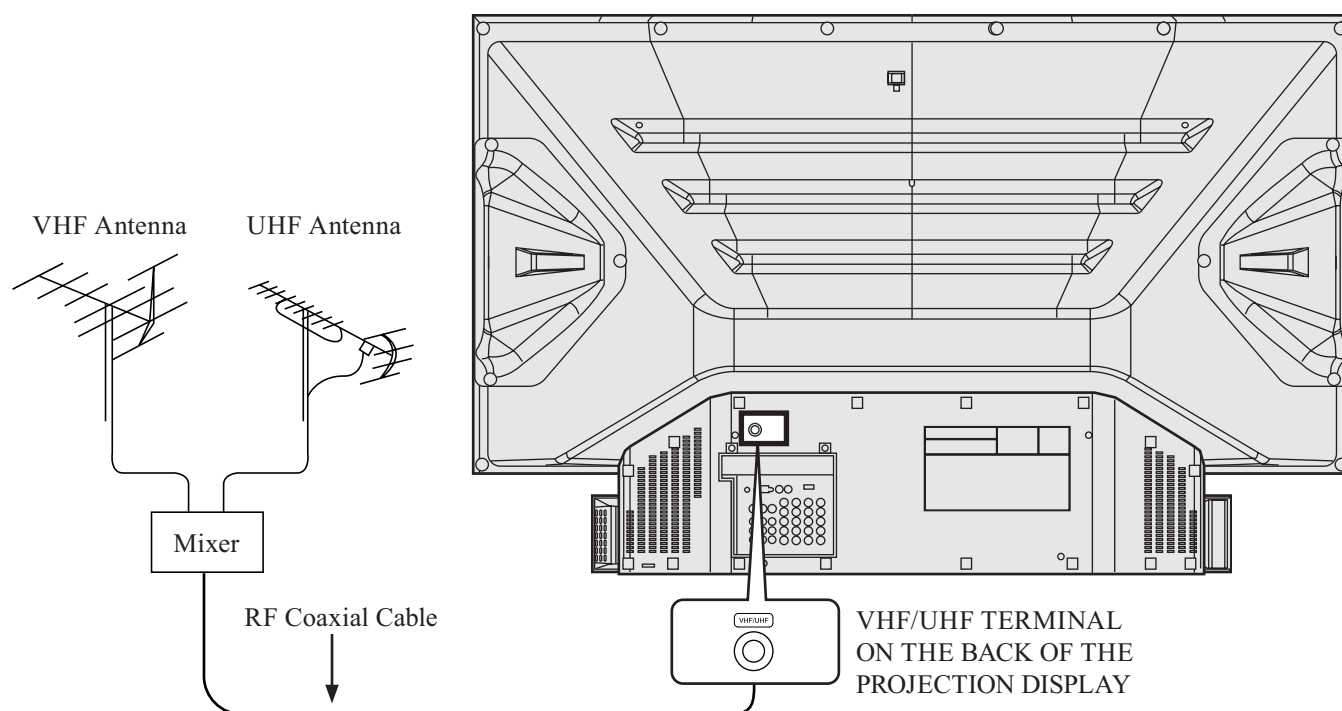
## Notes on connections

- Turn off the power supply for all components before making any connections.
- If the cables necessary for connecting a component to the system are not included with the component or available as an option, you may need to fashion a cable to suit the component concerned.
- Read the instruction manual for each system component carefully before connecting it.
- If there is a lot of jitter in the video signal input from the video source, the picture on the screen may flicker. In this case, it will be necessary to connect a TBC (time base corrector).

## Connecting the Antenna / Cable to the RF IN Terminal (No VCR)

### Antenna Connection

For proper reception of VHF/UHF channels, an external antenna is required. For best reception an outdoor antenna is recommended.

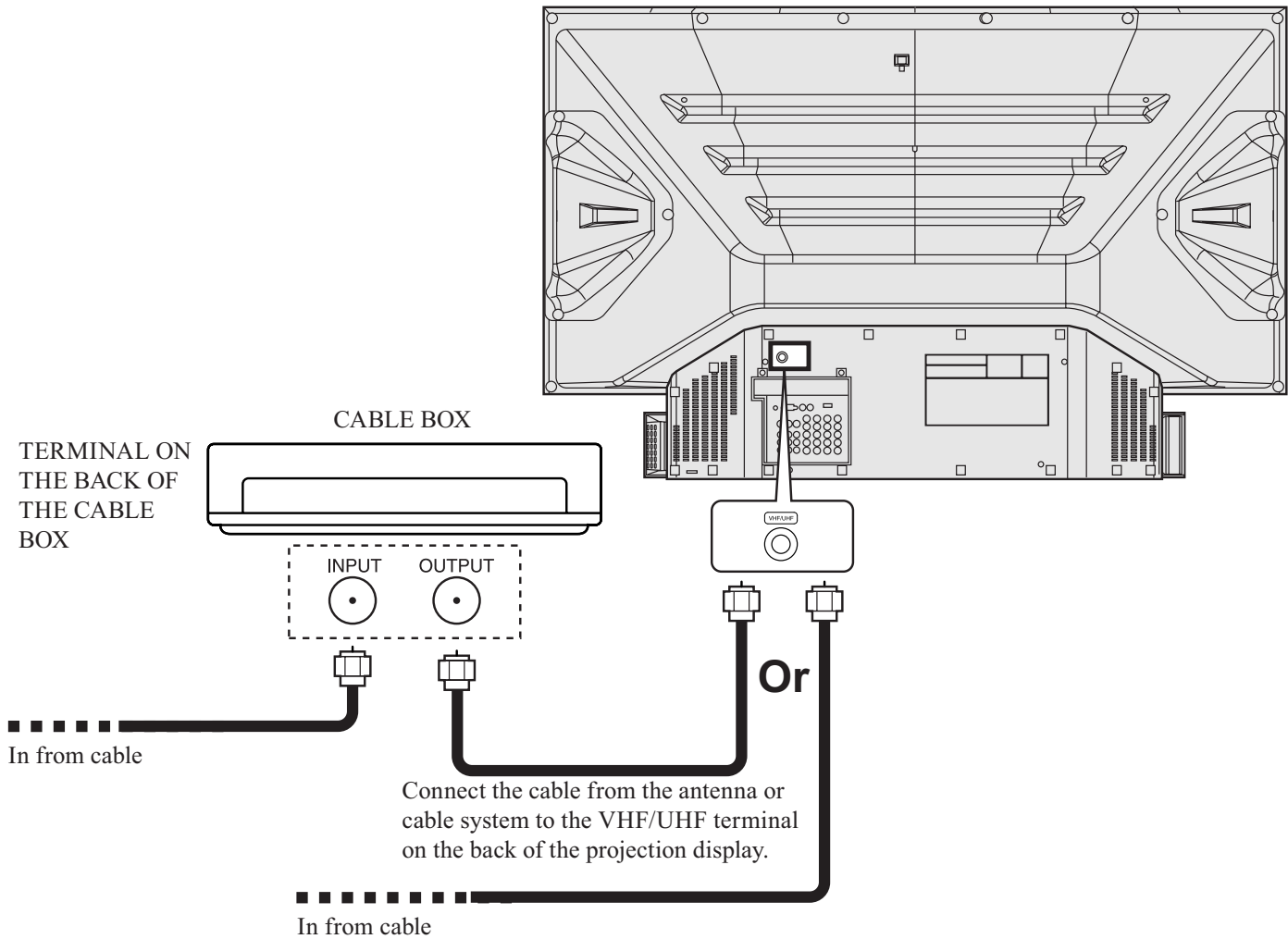


## CAUTION

When using "Nut type" RF coaxial cables, tighten with fingers only. Overtightening may damage terminals.

## Cable Connection

Use this configuration when connecting the projection display to a cable TV system.



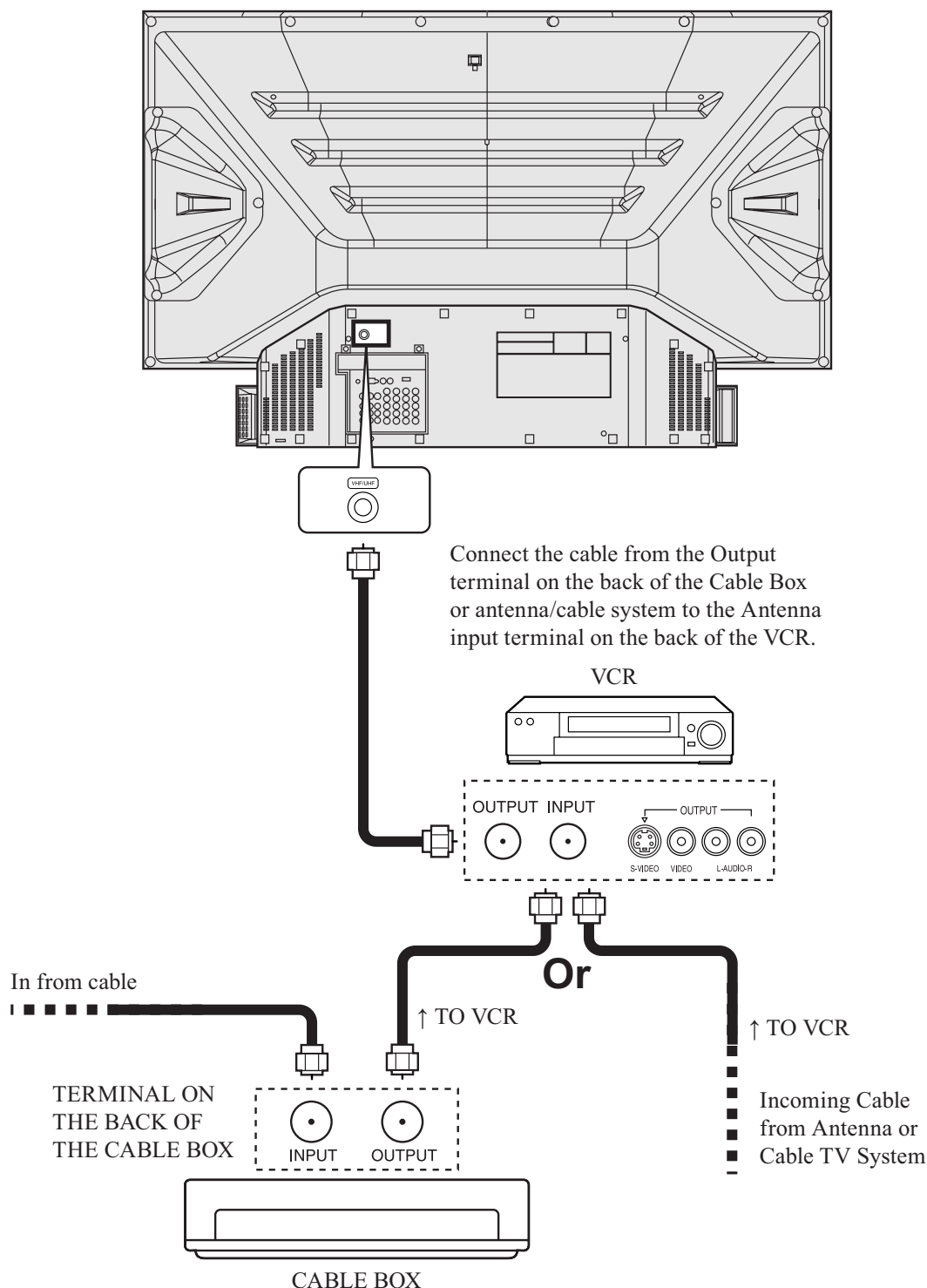
### Notes:

- Certain cable systems offset some channels to reduce interference or have Premium (scrambled) channels. A cable converter box is required for proper reception. Check with your local Cable company for its compatibility requirements.
- For reception of cable channels (01 - 125) connect the cable supplied by your local cable company. Antenna Mode must be set to CABLE. (P. 26)

# Installation

## Connecting the Antenna / Cable to the RF IN Terminal (VCR)

**Use this configuration when connecting the projection display to a cable TV system using VCR.**

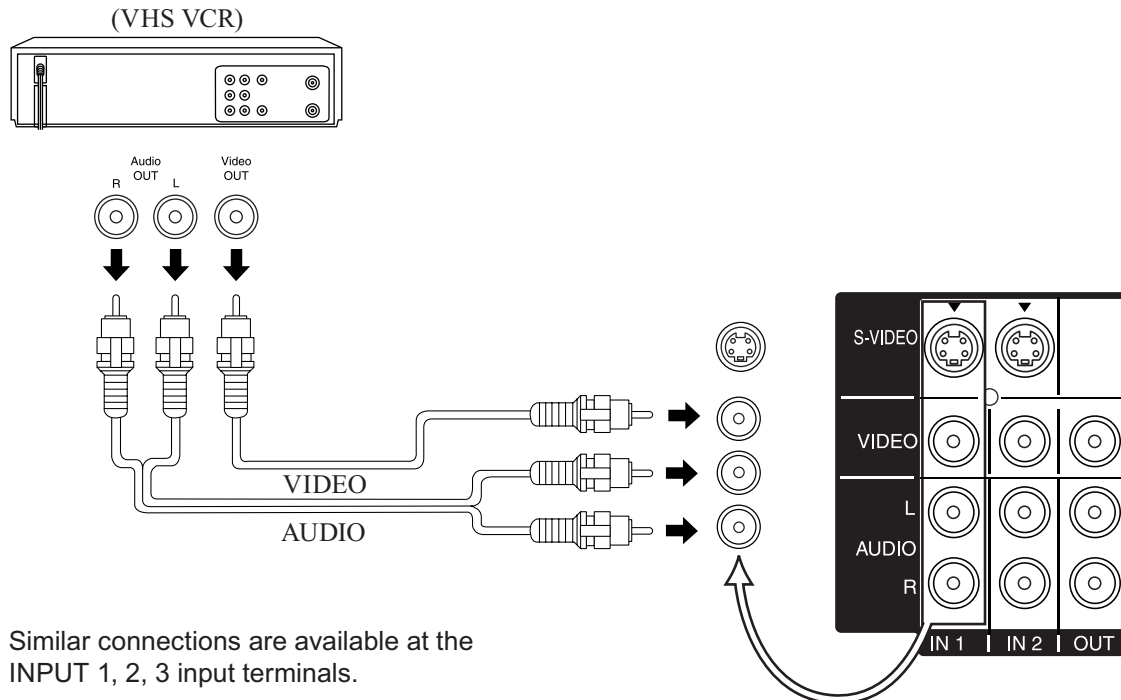
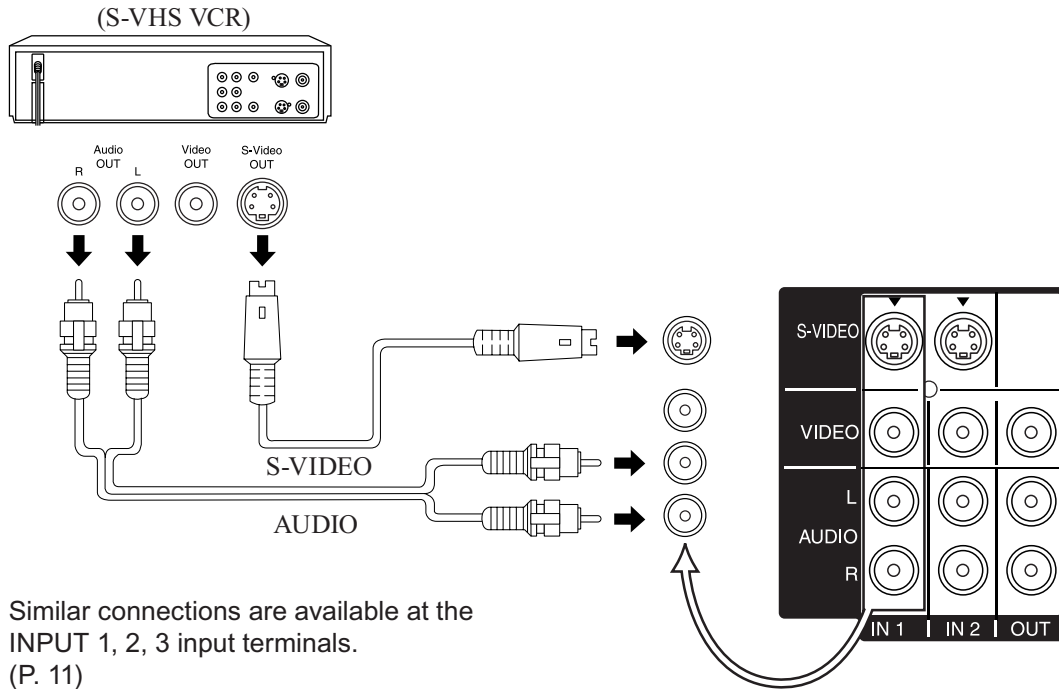


**Note:**

- When the RF coaxial cable is connected to the projection display VHF/UHF terminal via a cable box or VCR, set the TV channel to CH3 or CH4. This does not apply when signal is input from VIDEO INPUT.

# How to connect the “1, 2, 3” Input Terminals

Connects VCRs and other peripheral equipment



## Notes:

- Similar connections are available at the INPUT 1, 2, 3 input terminals.
- Input 3 is located on the side of the unit.
- Select the desired VIDEO input position by pressing the TV/VIDEO button. (P. 35)
- When connecting video cables, priority is given to the S-Video cable when the S-Video input terminal and the video input terminal are connected at the same time.

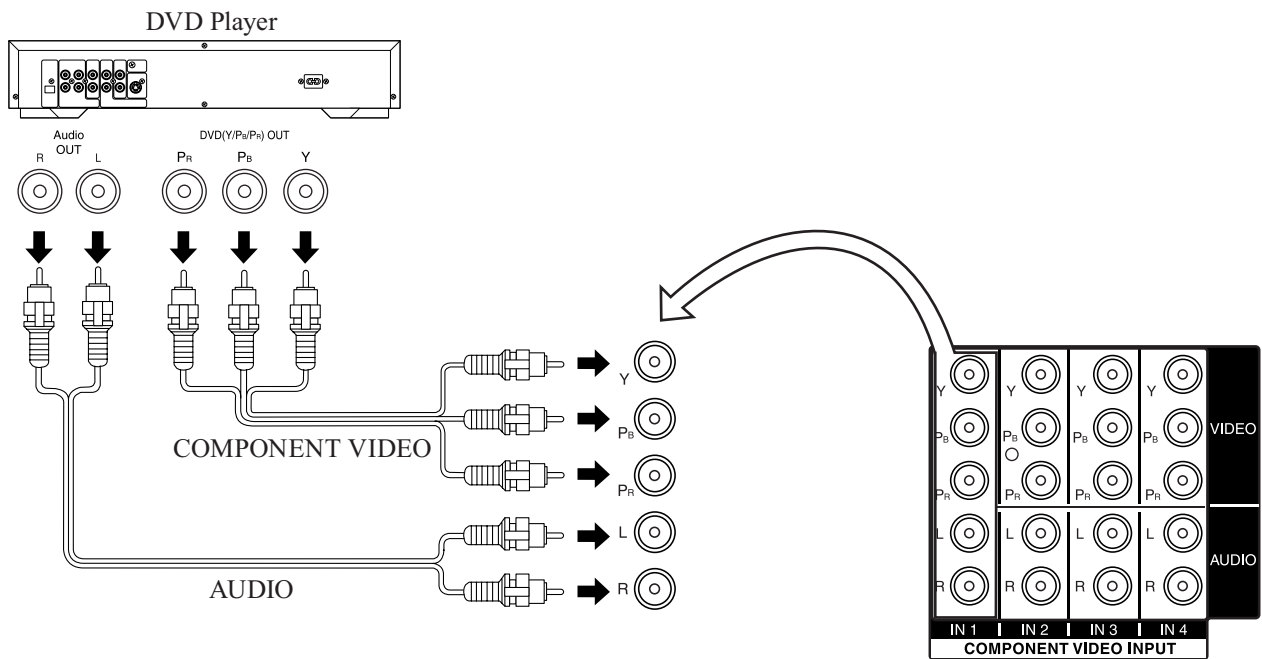


# Installation

## How to connect the COMPONENT VIDEO Input Terminals

Because each Y, PB, and PR signal is input independently, the Component signal allows for more accurate color reproduction.

The Component signal output terminal indication will differ according to the output device (Y, PB, PR). Please read the operating instructions included with the output device.



### Notes:

- Similar connections are available at the COMPONENT VIDEO INPUT 1-4 Terminals.
- Select the desired COMPONENT VIDEO INPUT position by pressing the TV/VIDEO button. (P. 35)
- Component video signals that can be input are 480i, 480p, 720p, and 1080i.

### Component Signals (Y, PB, PR) that can be Input

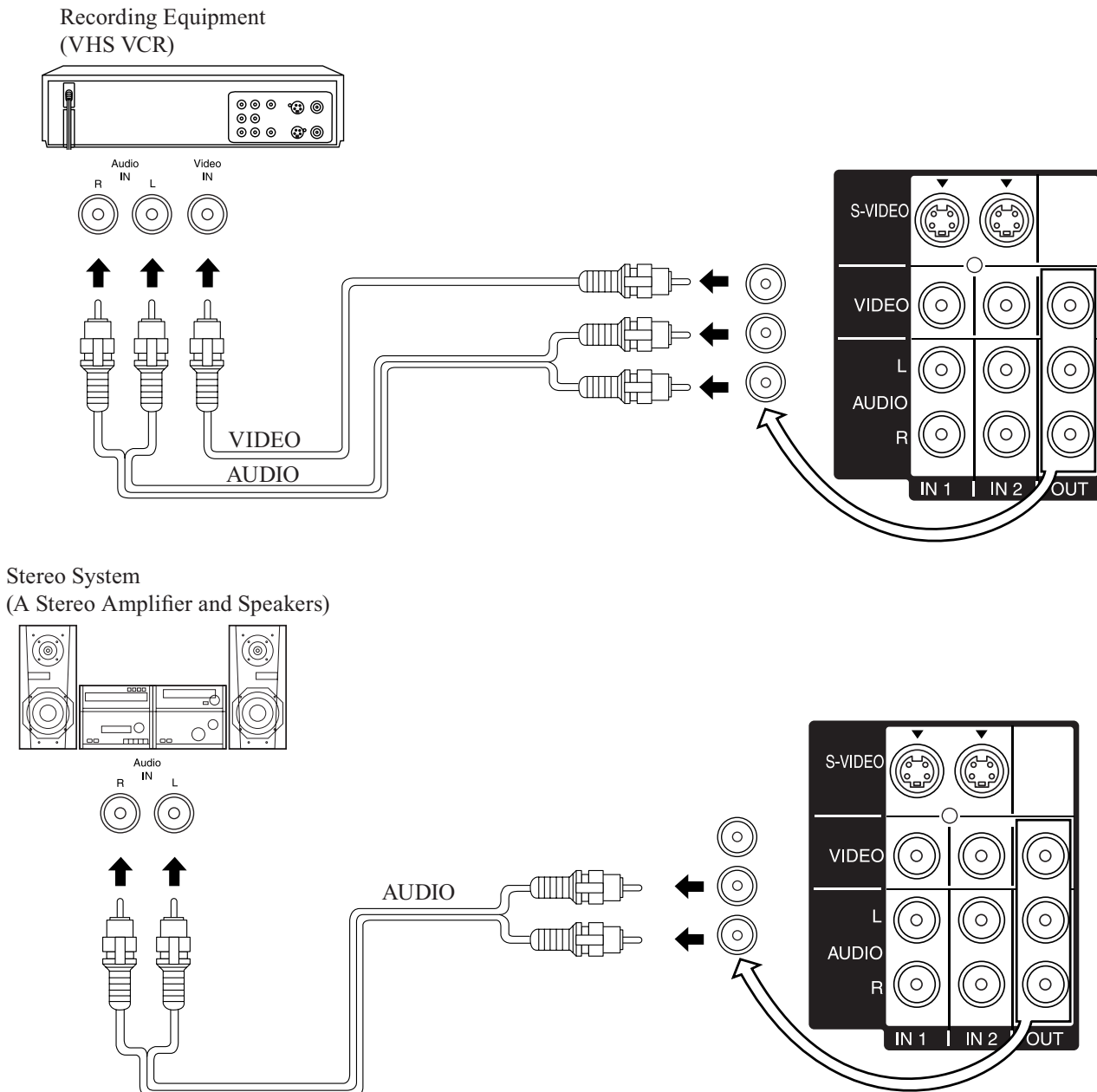
Mode type		Signal data			Information menu display
		No. of dots (H X V)	Horizontal frequency (kHz)	Vertical frequency (Hz)	
DTV Format Signals	480i	664 X 485	15.73	29.97	480 i
	480p	720 X 483	31.47	59.94	480 p
	720p	1 280 X 720	45.00	60.00	720 p
	*1080i	1 920 X 1 080	33.75	30.00	1080 i

### Note:

- Input signals, other than those listed with a \* mark, will give you a beautiful, stable picture.

## How to connect the AV OUT Terminals

The “AV Out” Terminals output the same signals as the main picture on the projection display screen and sound from the speaker at that time, e.g. TV programs or signals from INPUT 1, 2, 3 terminals.



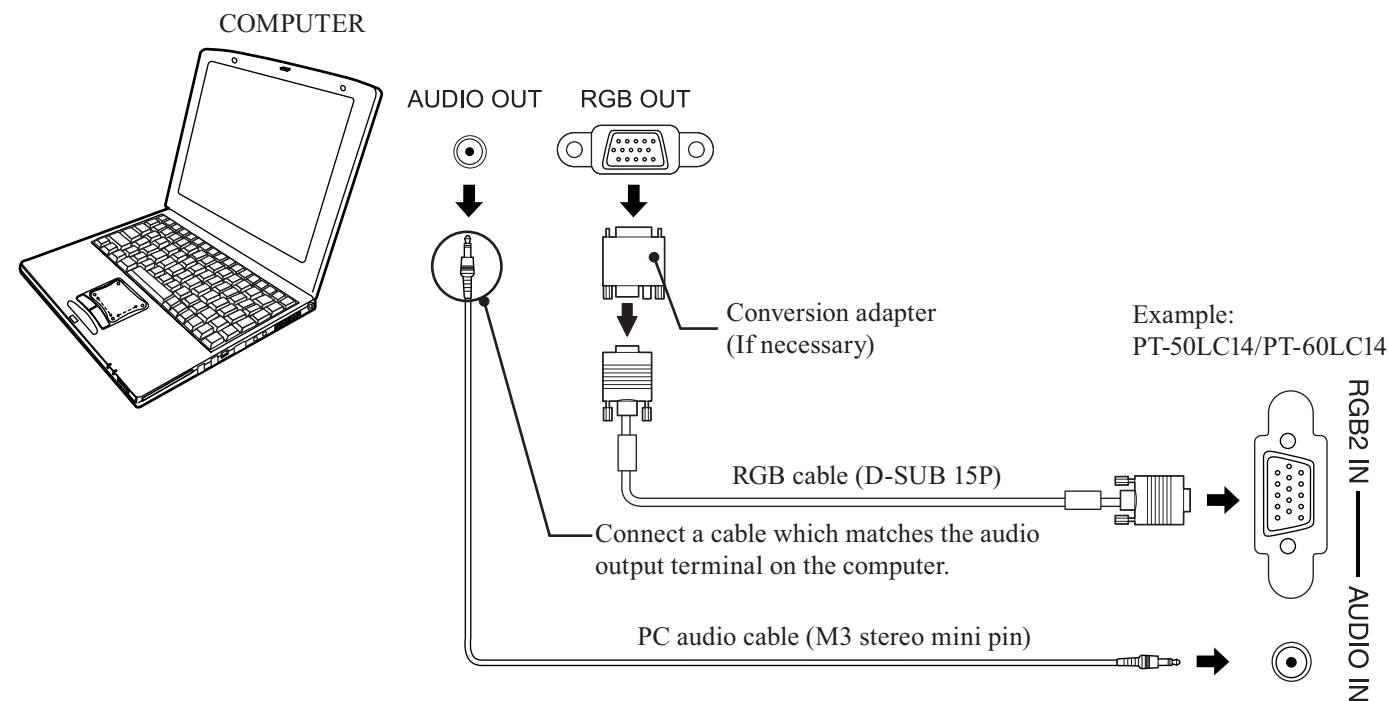
### Notes:

- This unit contains Video and Audio Outputs for the purpose of recording television programming to VCR. Due to license restrictions, if a device (STB, DVD, etc.) is connected to the HDMI input of the unit, no video or audio output is allowed.
- Never connect the VIDEO IN and OUT terminals to the same video recorder, as this could cause incorrect operation.
- Even if TV is in Split mode, OUT terminals only output the main picture and sound signals. A sub-picture, including channel search, etc., will not be output.
- VIDEO OUT terminals will not output Y, Pb, Pr, RGB/HDMI IN or SD/PC card signals.

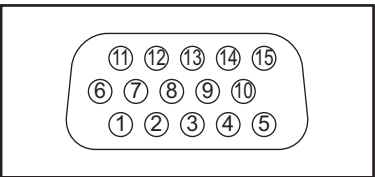
# Installation

## How to connect the RGB IN Terminals

### Connecting a PC to RGB IN



### RGB IN Terminal (D-SUB 15P) Pin Layouts



Connection port view

Pin No.	Signal name	Pin No.	Signal name
1	R	9	NC
2	G	10	Ground
3	B	11	NC
4	NC	12	NC
5	NC	13	HD/CSYNC
6	Ground for R	14	VD
7	Ground for G	15	NC
8	Ground for B		

NC: Not connected

#### Notes:

- Some PC models cannot be connected to the set. A conversion adapter is required to use the RGB cable (D-SUB 15P) to connect a Macintosh computer to the set. There is no need to use an adapter for computers with PC / AT compatible D-SUB 15P terminal.
- The computer shown in the illustration is for example purposes only. Additional equipment and cables shown are not supplied with this set.
- Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.
- Select the desired RGB input position by pressing the TV/VIDEO button. (P. 35)
- Similar connections are available at the RGB IN 1, 2 Terminals (For PT-50LC14/PT-60LC14).

## RGB signals that can be input

The table below lists the different types of RGB signals that can be input.

If a signal which differs greatly from any of the types listed below is input, the picture image may not be displayed correctly, or a black background may be displayed. At this time, “signal” will flash in the on-screen display for about 5 seconds.

Mode type		Signal data			display
		No. of dots (H X V)	Horizontal frequency (kHz)	Vertical frequency (Hz)	
Personal Computer Signals	VGA400 (70 Hz)	640 X 400	31.47	70.08	VGA400 70
	VGA480 (60 Hz)	640 X 480	31.47	59.94	VGA 60
	SVGA (60 Hz)	800 X 600	37.88	60.32	SVGA 60
	XGA (60 Hz)	1 024 X 768	48.36	60.00	XGA 60
DTV Format Signals	480i	664 X 485	15.73	29.97	480 i
	480p	720 X 483	31.47	59.94	480 p
	720p	1 280 X 720	45.00	60.00	720 p
	1080i	1 920 X 1 080	33.75	30.00	1080 i

### Notes:

- The D-SUB15P connector can accept RGB (H-V sync separate).
- When used with an external video processor/scaler, it must have RGB (H-V sync separate) output.

# Installation

## How to connect the HDMI Input Terminal

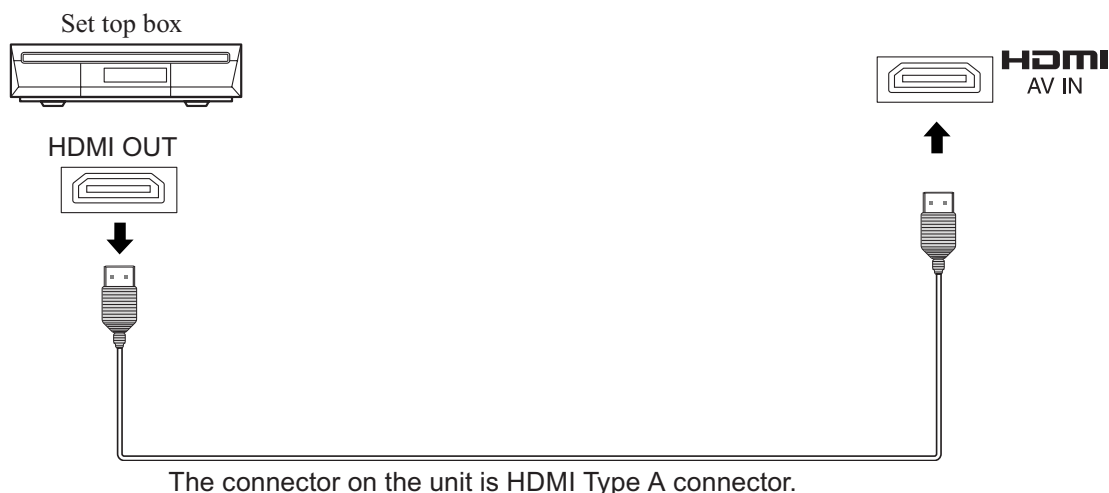
### About HDMI

HDMI is the first all digital consumer electronics A/V interface that supports several uncompressed standard, enhanced and high definition video format as well as all existing multi-channel audio formats. One jack supports both video and audio information. The HDMI/HDCP<sup>\*1</sup> input can be connected to an EIA/CEA 861/861B<sup>\*2</sup> compliant consumer electronic device, such as a set top box or DVD player equipped with a HDMI output connection. By inputting a High-bandwidth Digital Content Protection (HDCP) high definition picture source to the HDMI terminal of this unit, high definition pictures can be displayed on the screen in their digital form. The HDMI input terminal is not intended to be used with personal computers. This unit is compatible with 1080i, 720p and 480p formats. Select the output of the connected device to match that of the unit.

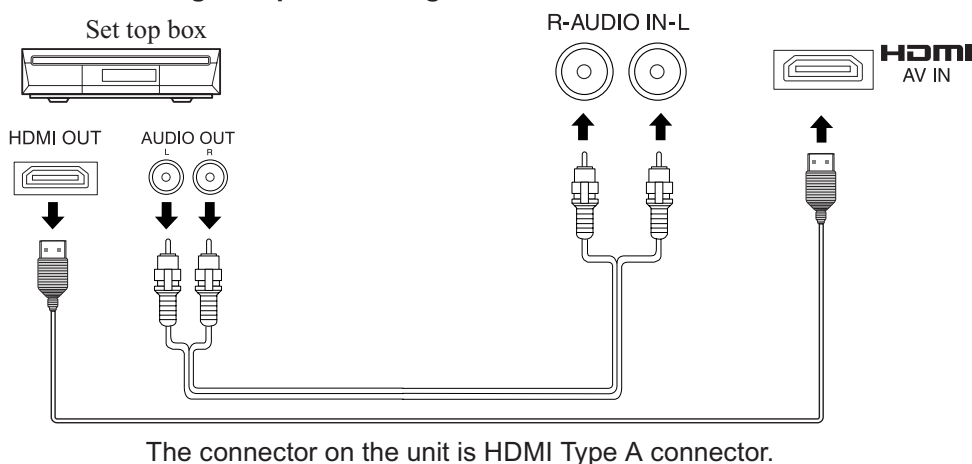
### Connection diagram

Follow the diagram below to connect the unit to a set top box or a DVD player.

#### When audio signal input is digital.



#### When audio signal input is analog.



### Notes:

<sup>\*1</sup> HDMI/HDCP = High Definition Multimedia Interface / High-Bandwidth Digital Copy Protection.

<sup>\*2</sup> EIA/CEA-861/861B Profiles compliance covers profiles for transmission of uncompressed digital video including high bandwidth digital content protection.

## Procedure

- 1** Connect the HDMI output from the set top box or a DVD player to the HDMI input on the back of the unit.
  - If you cannot display the picture because your Digital Set Top Box does not have a Digital Out terminal setting, use the Component Video Input (or the S-Video Input or Video Input). In this case, the picture will be displayed as an analog signal.
- 2** Press TV/VIDEO on the Remote Control to select HDMI input.

By inputting a High-bandwidth Digital Content Protection high-definition picture source to the HDMI IN terminal of this Device Display, high-definition pictures can be displayed on the screen in their digital form. (This terminal is for use in the future when High-bandwidth Digital Content Protection DVD players and D-VHS are put on the market.)

### Notes:

- Select the HDMI input position by pressing the TV/VIDEO button. (P. 35)
- The HDMI IN terminal can only be used with 1080i, 720p and 480p picture signals.
- If there is no audio, check if the source equipment has PCM output. If not, please use analog connections.
- Be sure HDMI is securely connected. If not, picture noise and/or incorrect picture display may result.

## Compatible formats

Video Signal:

The Device display is compatible with following formats. Please set the connecting device to following format.

Display mode	No. of dots	Vertical scanning frequency (Hz)
1080i	1920 x 1080i	59.94 / 60
720p	1280 x 720p	59.94 / 60
480p	720 x 480p	59.94 / 60
	640 x 480p	59.94 / 60

## Audio signal (PCM)

Please see "AUDIO SELECT" on page 43.

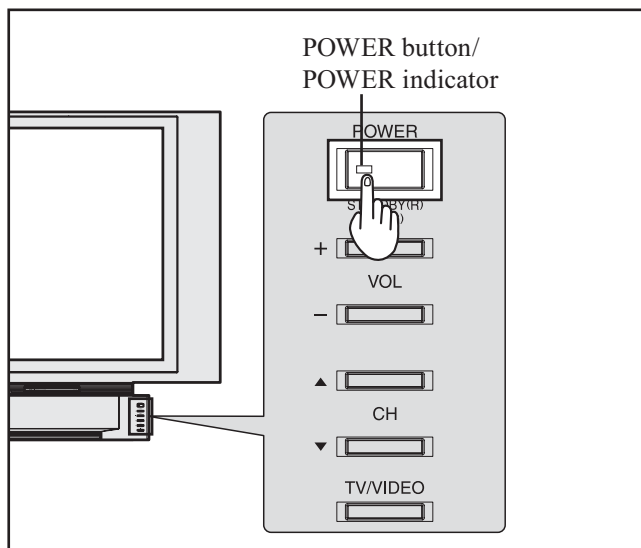
# Power ON and OFF

## Turning the Power ON and OFF

Always be sure to follow the procedure given below to turn the projection display power ON and OFF.

- The lamp cooling fan will continue to operate for approximately 1 minute after the power is turned off. At the same time, the POWER indicator will blink Red.

**Do not disconnect the power cord from the outlet and do not open the circuit breaker (unless necessary) while the cooling fan is still operating. Do not disconnect the power cord from the power outlet while the power indicator blinks Red.**



### Power ON

Press POWER on projection display or Remote Control to turn power on.

The Power Indicator blinks Green for about 10 seconds and then turns solid Green.

### Power OFF

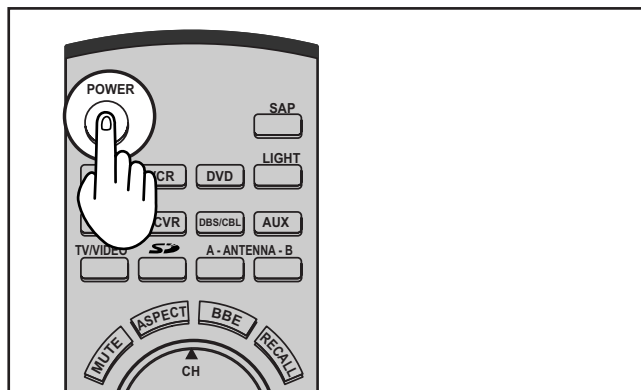
Press POWER on projection display or Remote Control to turn power off.

Power shuts off after a Black Screen is displayed for a few seconds.

#### Note:

- If POWER is pressed during the Black Screen display, Power is turned back on.

The Power Indicator blinks Red for about 1 minute and then turns solid Red.



#### Note:

- When the AC Cord is unplugged, the internal cooling fan stops operating. In this case, the lamp will be insufficiently cooled and will take a while to turn ON again.

#### The Power Indicator

LED	ACTION
Red	Power – OFF (Standby mode)
Red blink	Power – OFF (Now cooling)
Green	Power – ON
Green blink	Power – ON (Preparing to light lamp)

#### Notes:

- If the POWER button is accidentally turned off during use, after power is turned back on, it may take a short period before the lamp automatically comes on.
- After the unit is turned on, maximum picture brightness will be achieved in 5-10 minutes. This is normal.



## First Time Setup

In order to view TV or Cable programs, it is necessary to perform channel setting.  
If needed, follow the menus and procedures displayed on-screen for setting up the features.

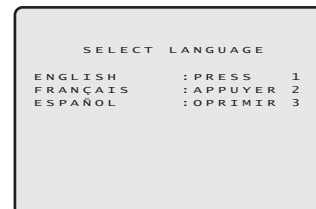


### Input Setup

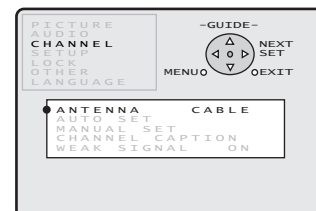
To select the configuration of RF input depending on the signal source.

#### Procedure

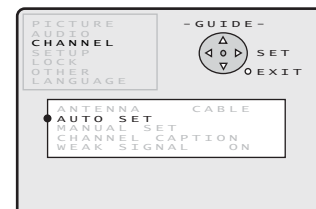
**1** Press 1, 2 or 3 to select language.



**2** Press OK to select Cable or TV.  
Press ► to next.



**3** Press OK to start the Auto Scan.  
After Auto Scan is completed the unit tunes to the first channel found during auto scan.

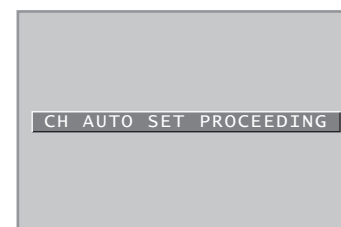


#### Notes:

- To cancel AUTO SET in progress, press the EXIT button.
- If setup is incomplete, check connection of Antenna/Cable to the RF IN Terminal, then try Auto Scan again. (PP. 26-27)

#### Case 1

When setup is complete, the lowest channel picture appears.



#### Case 2

If setup is incomplete, the following screen appears. Check connection of Antenna/Cable to the RF in Terminal, then try Automatic Channel Setting again. (PP. 26-27)



# Basic Menu Navigation



**1** Pressing the MENU button displays the MENU screen.

MENU

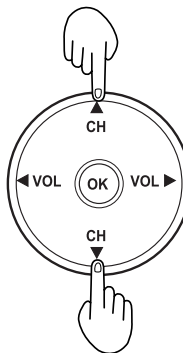


**Note:**

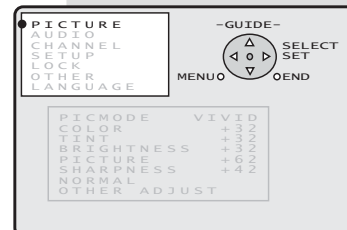
- Depending on the signal being input, some items may or may not be adjustable and some functions may or may not be available.

**2**

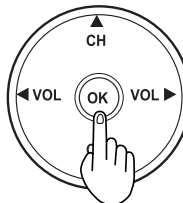
Press



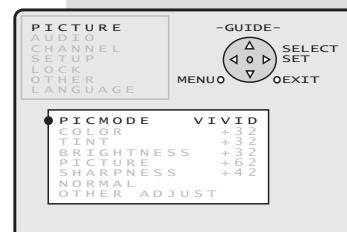
to select the desired menu.



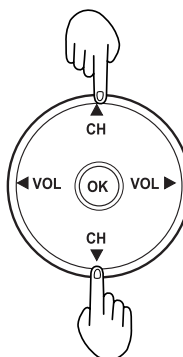
Press



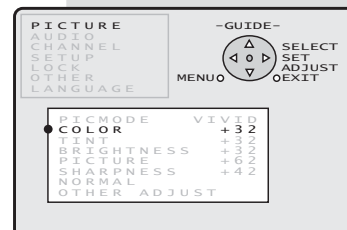
to enter the menu.



Press



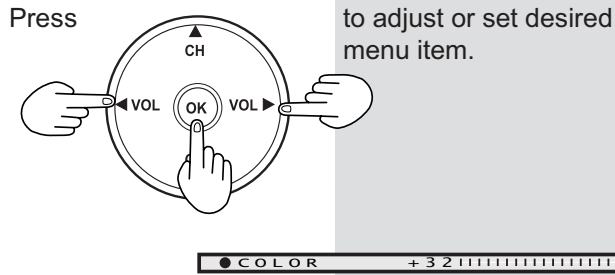
to select desired menu item.



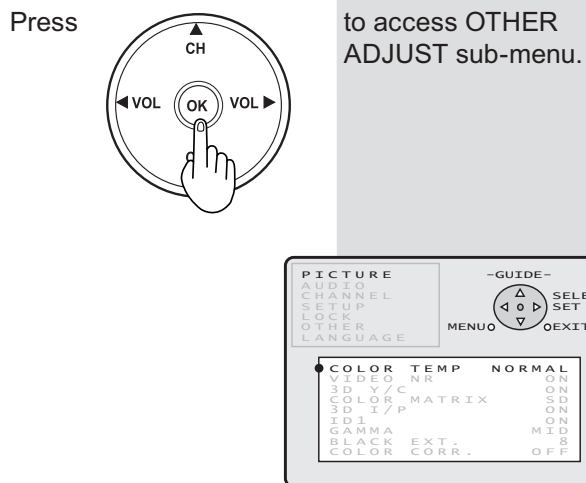
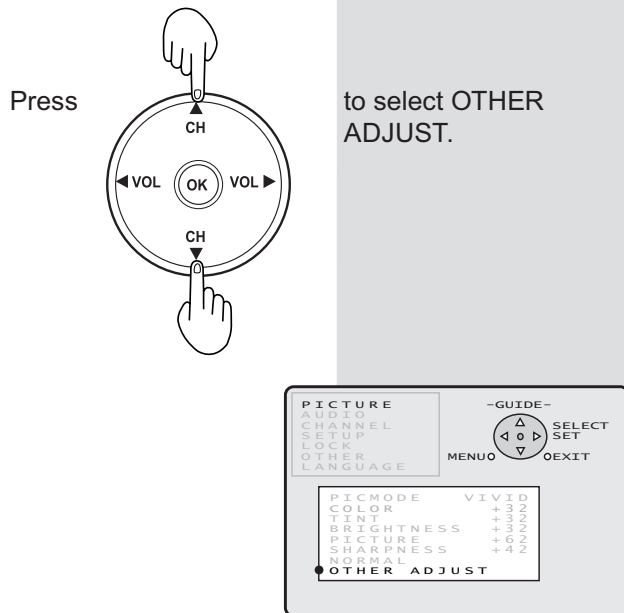
Continued in left column of next page.

# Basic Menu Navigation

Continued from page 24.

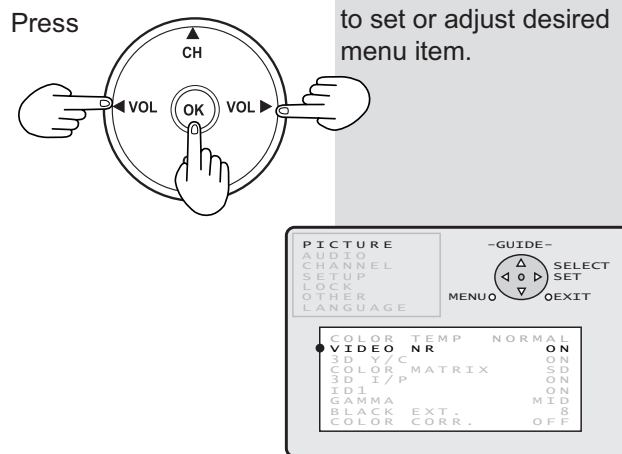
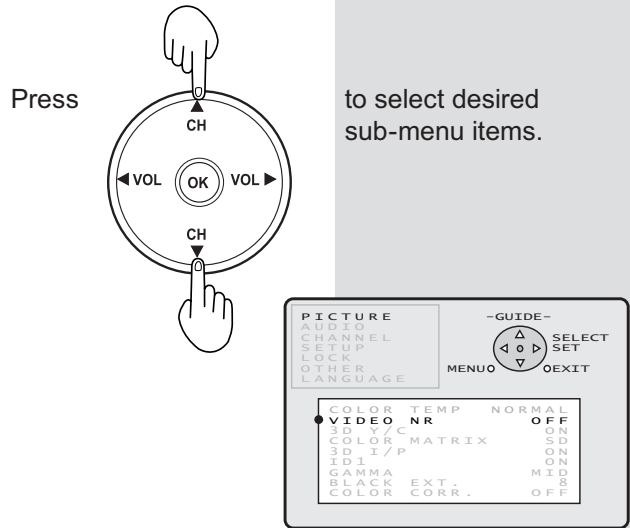


**Note: For OTHER ADJUST sub-menu**

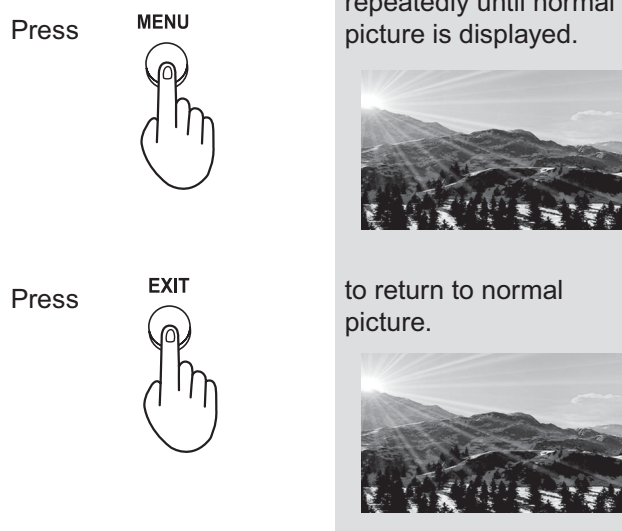


Continued in right column.

Continued from left column.



**Note: To EXIT menus.**



# Tuning channels

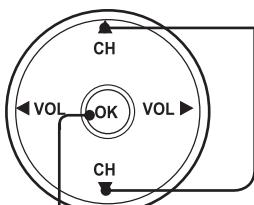
## Automatic channel setting

Automatically searches and adds receivable channels to memory.



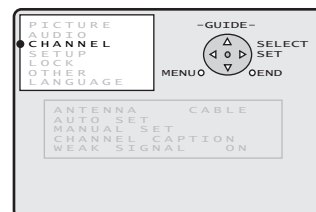
Press the MENU button to display the MENU screen.

1

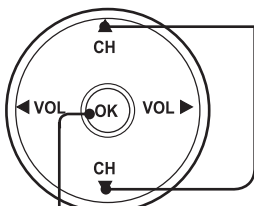


Press to select CHANNEL.

Press to display the CHANNEL screen.

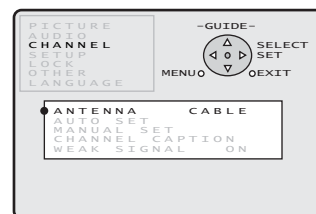


2

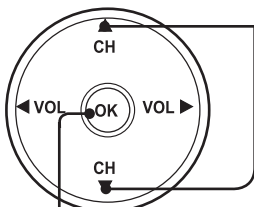


Press to select ANTENNA.

Press to select TV or CABLE.

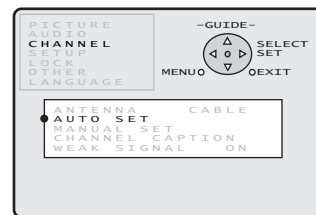


3



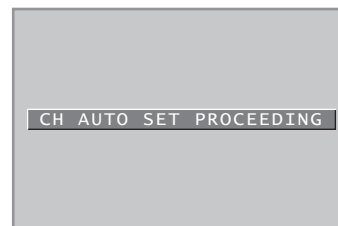
Press to select AUTO SET.

Press to run AUTO SET.



### Note:

- To cancel AUTO SET in progress, press the EXIT button.



Channels will automatically advance until all channels have been scanned. Channel numbers with a video signal present will be stored in the channel scan memory.

Continued on the next page.

### Note:

- TV or Cable Tuning mode must be set according to your connections.

4

**Case 1**

When setup is complete, the lowest channel picture appears.

**Case 2**

If setup is incomplete, the screen at right appears. Check connection of Antenna/Cable to the RF in Terminal, then try Automatic Channel Setting again.



5

EXIT



Press to exit menu.

**Notes:**

- After AUTO SET is finished, the lowest channel number added will be received.
- Some channels with very weak signals may be locked into memory. If desired, these channels can be deleted manually using the MANUAL SET feature.

# Tuning channels

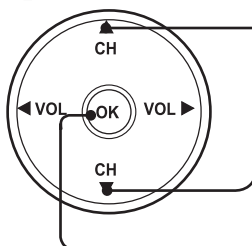
## Manual channel setting

Use this setting when changing setting of receiving channels or changing the channel display.

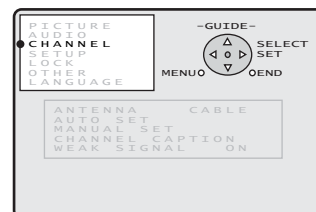


Press the MENU button to display the MENU screen.

1

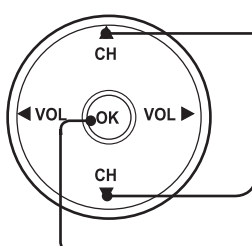


Press to select CHANNEL.

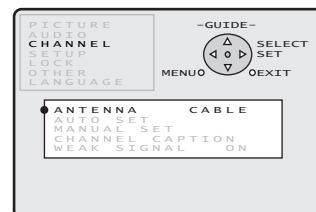


Press to display the CHANNEL screen.

2

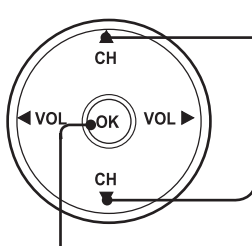


Press to select ANTENNA.

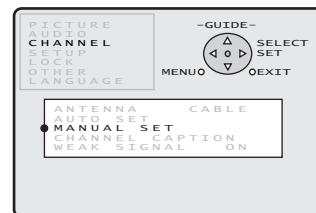


Press to select TV or CABLE.

3



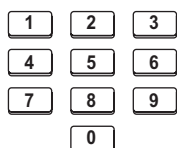
Press to select MANUAL SET.



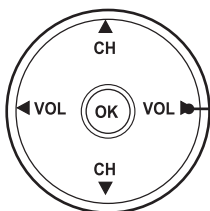
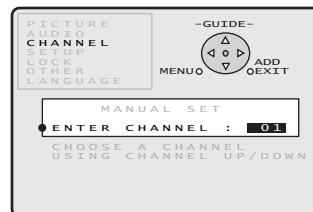
Press to display the MANUAL SET screen.

Continued on the next page.

## 4 To add channel

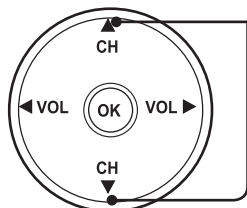


Press to select channel.

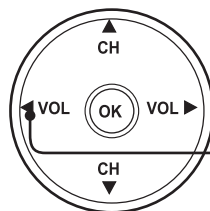
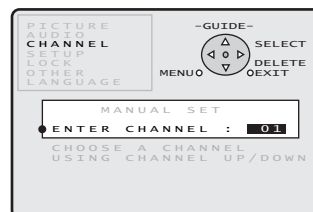


Press to add channels to memory.

## To delete channel



Press to select channel.



Press to delete channels from memory.

## 5 Repeat step 4 to continue adding or deleting channels.

## 6



Press to exit menu.

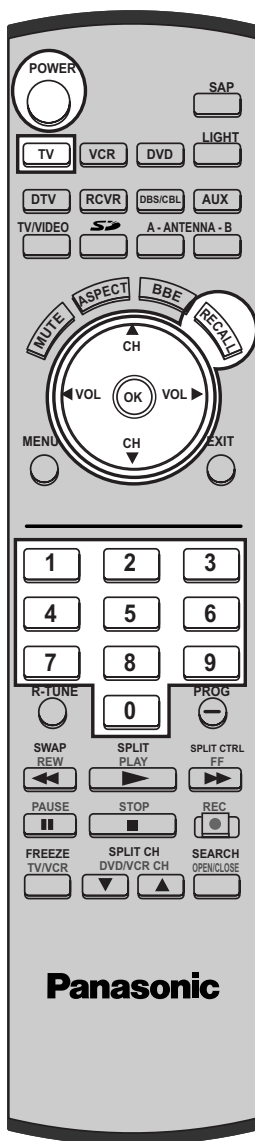
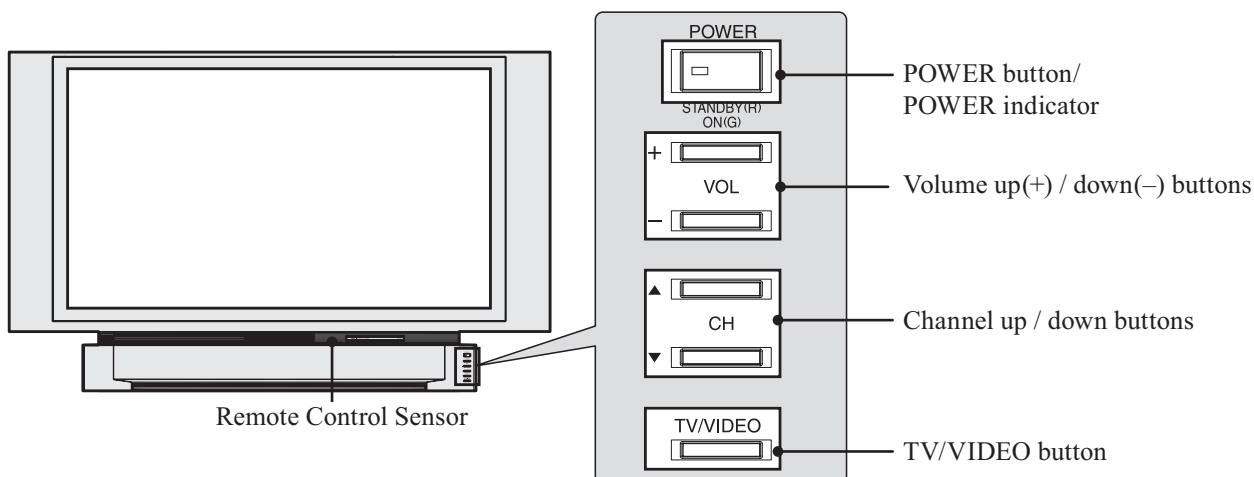
### Note:



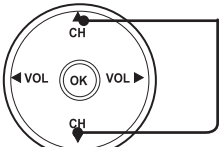
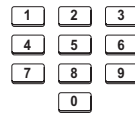
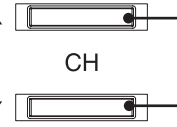
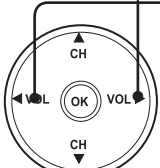
- Some channels with very weak signals may be locked into memory. If desired, these channels can be deleted manually using the MANUAL SET feature.



# Projection display operation

Operation can be done from the projection display.



- 1  Press to operate the projection display with the Remote Control.
- 2  Press to turn the projection display on.
- 3  Remote Control  
Press to select the desired channel. (Or use Number keys )  
**Or**  
  
**Note:**  
• Refer to "Using the Number keys" on the next page.
- 4  Unit  
Press to select the desired channel.  
 Press to select the desired volume level.



## Notes:

- The channel number and volume level are stored even after the projection display is turned off.
- Power consumption can be reduced if the volume level is lowered.

# Projection display operation

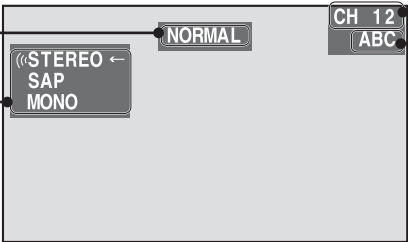
## TV status display



Press the RECALL button, except when the MENU screen is displayed, to display current TV status information.

Aspect types  
(P. 32)

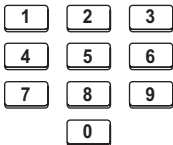
Receiveable  
broadcast types  
(P. 37)



Channel

Channel  
caption  
(P. 53)

## Using the Number keys



When selecting CABLE channels 100 to 125 with the Number keys, first press the 1 key, and then enter the remaining two digits.

Example 1: To select channel 125, first press the 1 key, then 2, then 5.

Example 2: To select channel 12, press the 1 key, then 2. Channel 12 appears momentarily.

Example 3: To select channel 8, press the 8 key. Channel 8 appears momentarily.

## Auto shut off

To extend lamp life, if there is no signal to the set's tuner for 5 minutes, the lamp will shut off automatically.

## Invalid operation notification

If an invalid operation is attempted, the mark shown right is displayed.



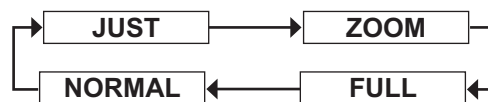
Example: Invalid operation was tried during FREEZE mode.

# ASPECT Controls

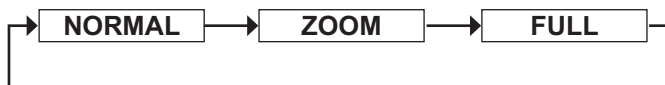
The color monitor will allow you to enjoy viewing the picture at its maximum size, including wide screen cinema format picture.



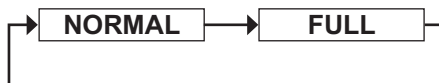
The aspect mode changes each time the ASPECT button is pressed.



- When a 480p signal is being received, the mode switches between NORMAL, ZOOM, and FULL only.



- During PC input, the mode switches between NORMAL and FULL only.



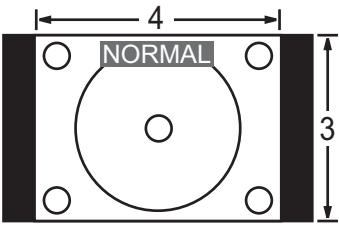
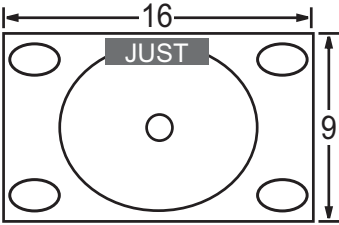
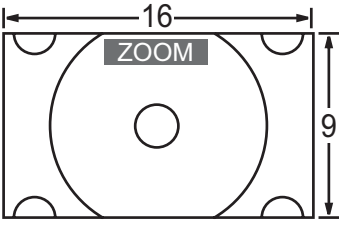
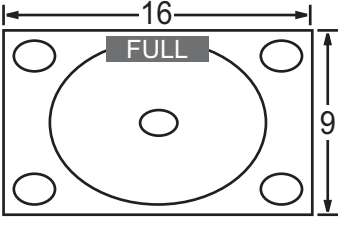
## Notes:

- When a 1080i or 720p signal is being received, the mode is set to FULL, and aspect switching is not possible.

## Notes:

- However, if the mode selected does not match the aspect ratio of the input signal, the original picture quality may be affected.
- If using this projection display in places, such as cafes or hotels, with the aim of displaying programs for a commercial purpose or for public presentation, please note that by using the aspect ratio (16:9) selection function to change the aspect ratio, you may be infringing on the rights of the original copyright owner of that program under copyright protection laws.
- If a normal (4:3) picture is projected in wide screen, distortion may occur around the edges so that part of the picture may no longer be visible. We recommend viewing in 4:3 mode so you can enjoy the picture as it was intended to be seen.

# ASPECT Controls

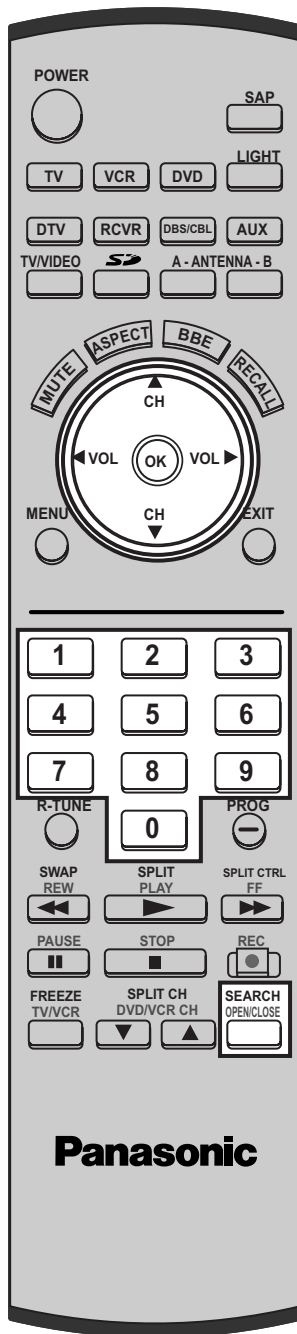
Mode	Picture	Explanation
NORMAL	 <p>The diagram shows a central circle with a smaller circle inside it. The width is labeled as 4 and the height as 3. The word 'NORMAL' is written above the central circle.</p>	NORMAL will display a 4:3 picture at its standard 4:3 size.
JUST	 <p>The diagram shows a central circle with a smaller circle inside it. The width is labeled as 16 and the height as 9. The word 'JUST' is written above the central circle.</p>	JUST mode will display a 4:3 picture at maximum size but with aspect correction applied to the center of the screen so that elongation is only apparent at the left and right edges of the screen. The size of the picture will depend on the original signal.
ZOOM	 <p>The diagram shows a central circle with a smaller circle inside it. The width is labeled as 16 and the height as 9. The word 'ZOOM' is written above the central circle.</p>	ZOOM mode magnifies the central section of the picture.
FULL	 <p>The diagram shows a central circle with a smaller circle inside it. The width is labeled as 16 and the height as 9. The word 'FULL' is written above the central circle.</p>	FULL will display the picture at its maximum size but with sight elongation.

## Note:

- The screen size changes if ID1 is detected. (P. 58)

# Searching for the desired channel (Channel search)

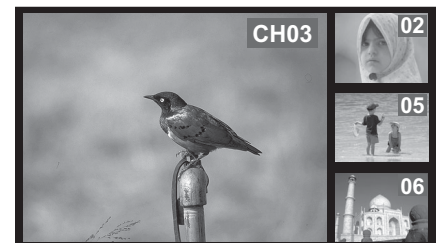
Channel search displays each channel, in order, as a paused image. Channels are displayed from the left top to the right bottom in order. When it reaches the right bottom, the next channel is displayed at the left top, overwriting the previously displayed channel.



When the SEARCH/OPEN/CLOSE button is pressed during single screen.



Example



**When a channel button is pressed during channel search.**

**Number keys:**

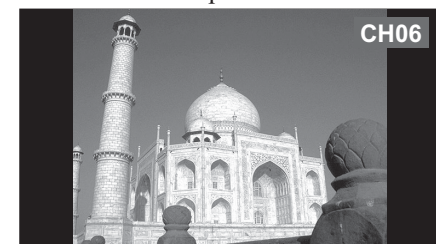
Example: When 6 is pressed, channel 6 is displayed in single screen.

**Channel up and down buttons:**

When ▲ or ▼ button is pressed, the next channel up or down is displayed in single screen.

Example: Select channel 6

Sound from the left screen is output from the speakers on the projection display set.



## Note:

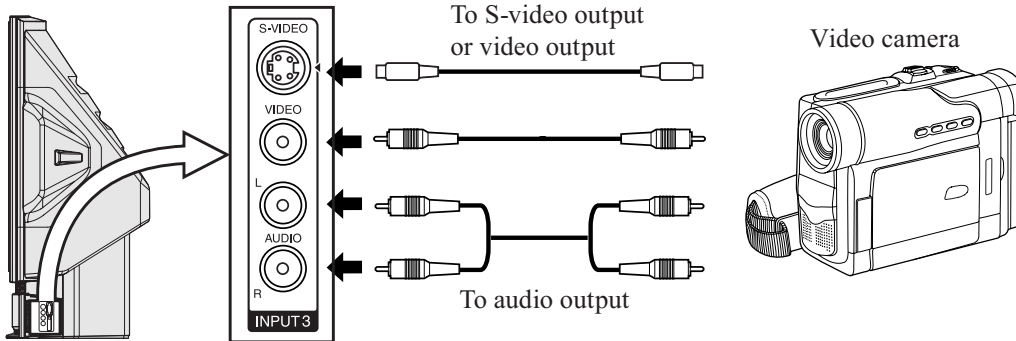
- To end channel search, press SEARCH/OPEN/CLOSE.

# Playing peripheral equipment

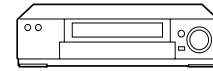
## Confirming connections

A video camera uses the Input 3 terminal on the front of the projection display.

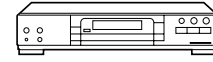
Example: Connect Input 3



VCR



DVD player



This equipment can also be connected to the rear terminals. See Connections for details.



## Turning the power on and switching input modes

1



Turn the projection display on.

2

Remote Control



The input mode changes each time this button is pressed.

Unit

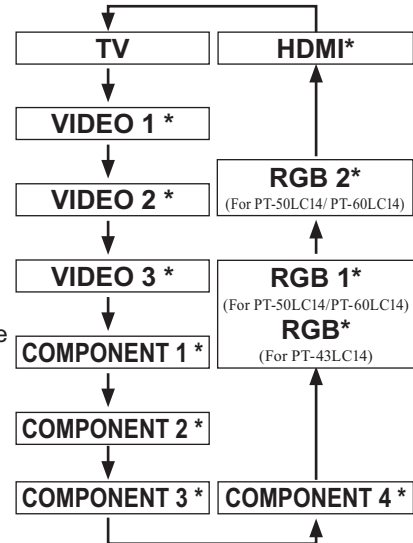


\* If SKIP is set as the Input Label setting of SETUP, the mode will not be changed. (P. 52)



Card input mode is selected.

• Pressing SD again exits Card input mode.



VIDEO 1	Signal of source connected to INPUT 1 is displayed.
VIDEO 2	Signal of source connected to INPUT 2 is displayed.
VIDEO 3	Signal of source connected to INPUT 3 is displayed.
COMPONENT 1	Signal of source connected to COMPONENT VIDEO INPUT 1 is displayed.
COMPONENT 2	Signal of source connected to COMPONENT VIDEO INPUT 2 is displayed.
COMPONENT 3	Signal of source connected to COMPONENT VIDEO INPUT 3 is displayed.
COMPONENT 4	Signal of source connected to COMPONENT VIDEO INPUT 4 is displayed.
RGB 1 (or RGB)	Signal of source connected to RGB IN 1 (or RGB IN) is displayed.
RGB 2	Signal of source connected to RGB IN 2 is displayed.
HDMI	Signal of source connected to HDMI IN is displayed.
CARD	Signal of source connected to CARD SLOT is displayed.

3

Operate the connected equipment.

# Mute / Freeze / SAP

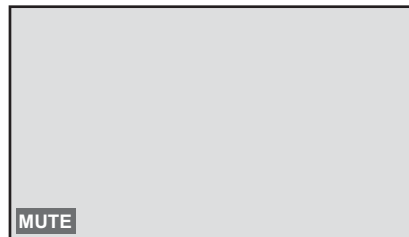


## Sound mute



Useful when answering the phone or receiving unexpected visitors

Press this button to mute the sound. Press again to reactivate sound. Sound is also reactivated when power is turned off or volume level is changed.



### Note:

- The audio output from AV OUT is not muted.

## Freezing pictures

FREEZE  
TV/VCR



Projection can be switched between a frozen (still) picture and a moving picture each time the FREEZE button on the Remote Control unit is pressed. Press FREEZE button again to resume motion.



### Note:

- The video output from AV OUT is not frozen.

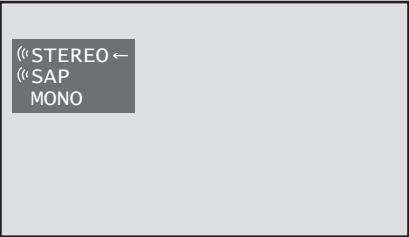


Receivable Broadcast Types

The following are possible broadcast types with their accompanying on-screen displays. The signal being received is indicated with a “⌂” mark while the selected audio mode is indicated with an arrow. To change the audio mode for these broadcasts, follow the “Select Audio Mode for TV Viewing” section (below.)

MTS Stereo and SAP broadcast

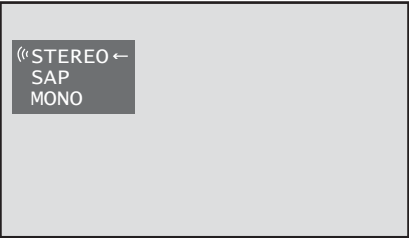
Multi-channel Television Sound Stereo (main language) and Secondary Audio Program (sub language) broadcasts are both being received simultaneously. Select the STEREO or SAP audio mode.



MTS Stereo broadcast

Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode.

- If stereo broadcast is weak and the display flickers, select MONO audio mode for possibly better results.



SAP broadcast

Secondary Audio Program (sub language.)  
Select SAP audio mode for the sub language.



MONO broadcast

Normal monaural sound broadcast.

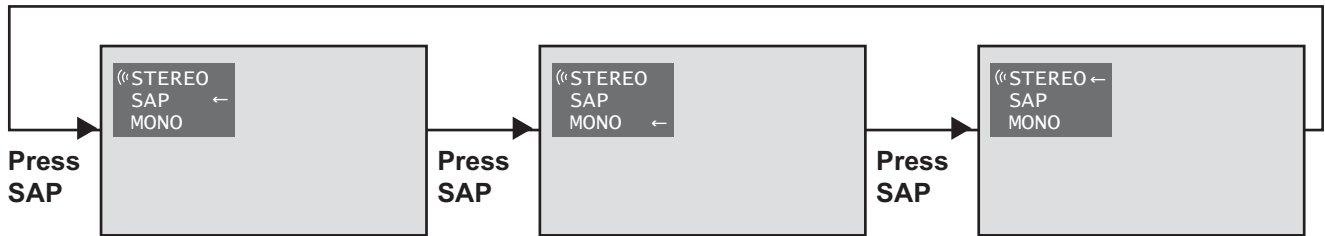


Select Audio Mode for TV Viewing



- Press SAP button to select the desired audio mode as described below.  
(Arrow shows selection.)
- Each press of SAP button will change the audio mode as shown below.
  - “SAP” is selected with first press of SAP button.

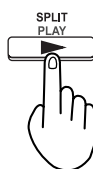
Example:



# Split screen

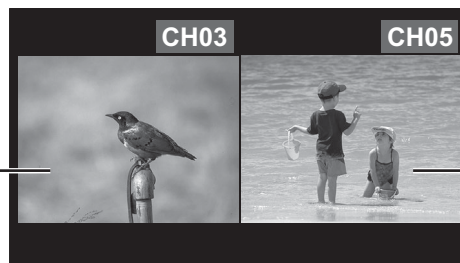


## Splitting the screen



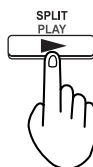
Press to split.  
(The previously selected screen appears on the left.)

Left screen  
(Main picture)



Right screen  
(Sub picture)

## Returning to one screen

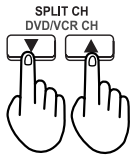


Press to return.

### Notes:

- Sound from the Left screen is output from the speakers on the projection display set.
- When the screen is split, signals of the Left screen are output from the rear monitor output terminal.
- The left and right screens are processed by individual circuits and, therefore, may vary in image quality.
- Split screen returns to single screen when the projection display is turned off.
- With the Left screen, as with a single screen, you can change the input, change channels, and adjust the volume.
- The right and left screens cannot display the same picture at the same time.
- CARD input screen cannot be displayed using the Split Screen function.
- When viewing a split screen with HDMI as the input signal of the Left screen, if the HDMI signal is incompatible (see P. 21) or is nonexistent, the entire screen will go black and "SIGNAL" will be displayed.

## Changing the channel of the right screen

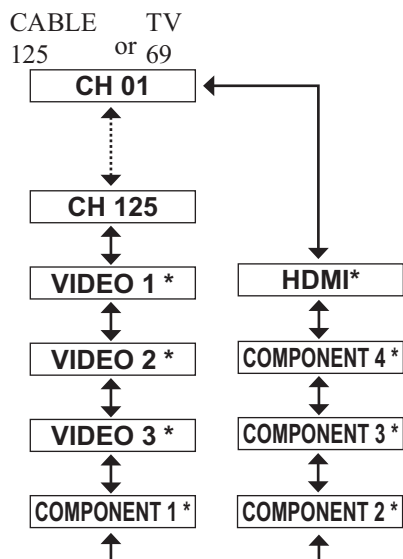


Press to select the desired channel.

Example:  
During SPLIT SCREEN NORMAL



SPLIT CH ▲, ▼ buttons can also be used to select an outside input for the right side of the screen.



\* If SKIP is set as the Input Label setting of SETUP, the mode will not be changed. (P. 52)

### Note:

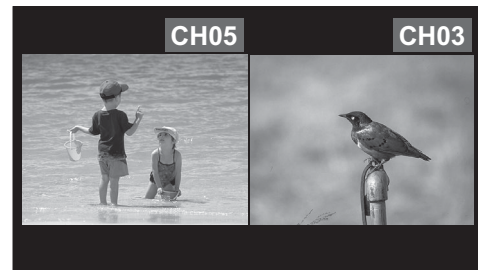
- When outside input is finished, the lowest registered channel number is displayed. For faster selection, press the SWAP button to change the screen to the left. Then, press the TV/VIDEO button to directly change the input. Finally, press SWAP button again to change the screen back to the right.

## Swapping left and right screens



Press to swap.

Example:  
During SPLIT SCREEN NORMAL



### Note:

- Picture quality may change according to the combination of signals input to the left and right screens.

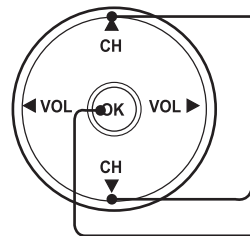
# Adjusting screen position and size



Press to select the screen mode.

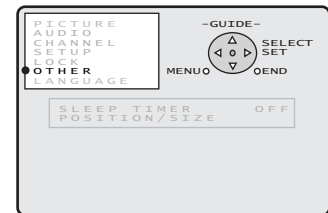
2

Press the MENU button to display the MENU screen.



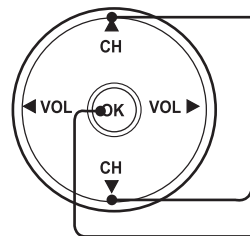
Press to select OTHER.

Press to display OTHER screen.

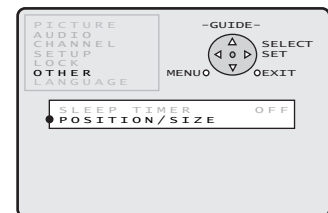


3

Press to select POSITION/SIZE.

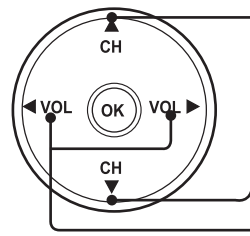


Press to display POSITION/SIZE sub-menu.



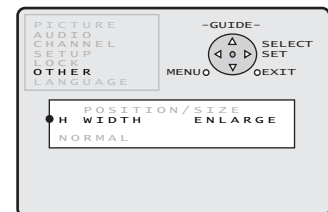
4

Press to select each item.

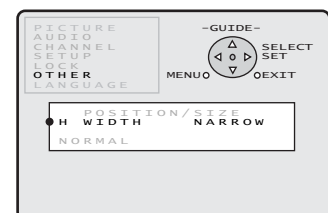


Press to set or adjust to desired level. (See next page.)

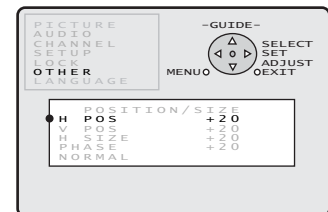
JUST mode



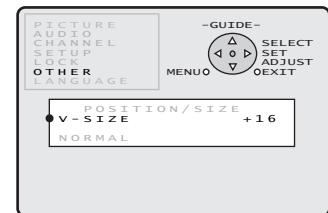
NORMAL mode



RGB input



ZOOM mode



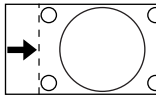
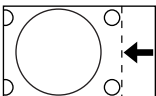
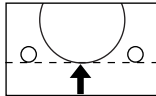
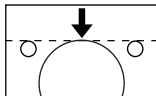
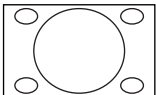
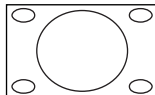
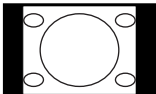
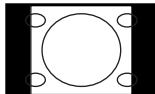
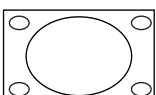
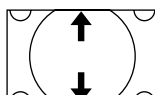
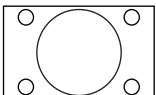
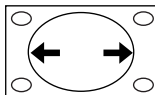
## Note:

- NORMAL is displayed at default.



Press to exit menu.

## Adjusting screen position and size

Adjustment item	Button	Adjustment Details		Note
<b>H Position</b>	Press ► button.	The image moves to the right.		PC input
	Press ◀ button.	The image moves to the left.		
<b>V Position</b>	Press ► button.	The image moves up.		PC input
	Press ◀ button.	The image moves down.		
<b>H WIDTH</b>	Press OK button.	If noise appears on the ends of the image in SHRINK, switch to ENLARGE.	 (SHRINK)  (ENLARGE)	Only JUST mode
		If noise appears on the ends of the image in WIDEN, switch to NARROW.	 (WIDEN)  (NARROW)	Only NORMAL mode (Except PC input)
<b>V SIZE</b>	Press ► button.	Press to enlarge image vertically.		Only ZOOM mode
	Press ◀ button.	Press to shrink image vertically.		
<b>H SIZE</b>	Press ► button.	Press to enlarge image horizontally.		PC input
	Press ◀ button.	Press to shrink image horizontally.		
<b>PHASE</b>	Press ► button. Press ◀ button.	Adjust in order to remove any picture interference or contour blurring which may occur in computer images.		PC input

### Notes:

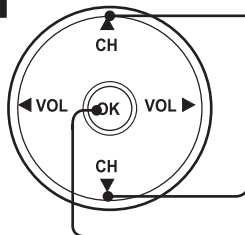
- This projection display is equipped with various screen modes. If a screen mode with a different aspect from the broadcast program is selected, image will appear differently. Select the proper screen mode with this in mind.
- Be careful when using this projection display for commercial purposes or for public use, such as in cafes and hotels.
- Shrinking and enlarging images by using screen mode switching function (zoom, etc.) may violate copyright laws.
- Images displayed on a wide screen TV will be cut off or distorted at the edges, when viewing normal aspect images of 4:3 in ZOOM, JUST or FULL mode. Display in NORMAL mode to view the original image intended by the producer.
- For 1080i and 720p input images, screen size cannot be adjusted.
- The adjusted setting will be kept even when the projection display is turned off.
- The signals output from the monitor output terminal on the back of the projection display is not affected when the screen size and position is adjusted.

# Audio Adjustments

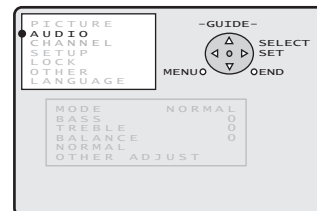


Press the MENU button to display the MENU screen.

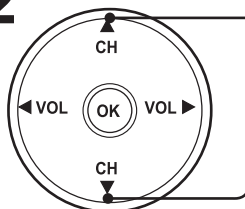
1



Press to select AUDIO.



2

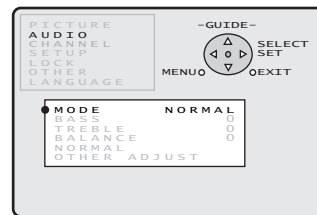


Press to display AUDIO screen.

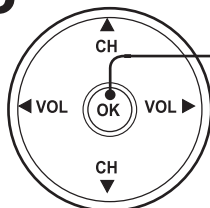
Press to select each item.

**Note:**

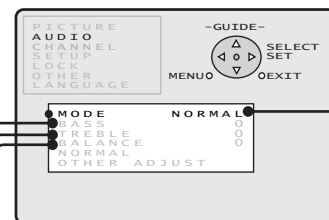
- NORMAL is displayed at default.



3



Press repeatedly to select MODE.



**BALANCE:**

Emphasize the left/right speaker volume.

**TREBLE:**

Increase or decrease the treble response.

**BASS:**

Increase or decrease the bass response.

**NORMAL**

Emits the original sound.

**AUTO**

The sound level is automatically adjusted to suit the program source.

**CINEMA**

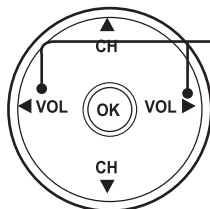
Sound suited to movies.

**MUSIC**

Sound suited to music.

**SPEECH**

Sound suited to dialogue.



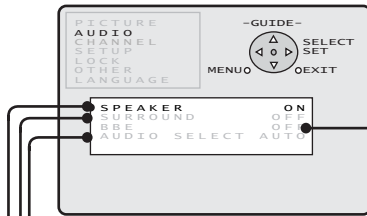
Adjust to desired level while viewing picture through the menu overlay.  
Press the MENU button or wait a few seconds to return to the previous menu screen.



Continued on next page.

## OTHER ADJUST

While in the AUDIO menu screen, select OTHER ADJSUT and press the OK button to display the OTHER ADJUST sub-menu.



### BBE:

Natural sound is offered. (See below.)

### AUDIO SELECT (HDMI input only):

Perform input switching of analog audio input and digital audio input when using the HDMI terminal.

AUTO : Automatically performs digital/analog input switching according to the input signal type.

Digital in : Forces use of digital audio input signal transmitted via the HDMI terminal.

Analog in : Forces use of analog audio input signal transmitted via separate RCA terminals.

### SURROUND:

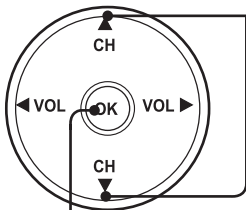
Enhances audio response when listening to stereo.

### SPEAKER:

This feature is used to turn TV speakers ON or OFF.

ON: TV speakers operate normally.

OFF: TV speakers off.



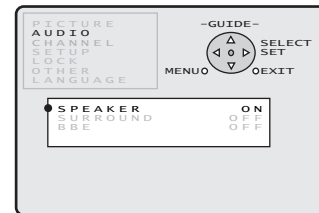
Press to select item.

Press repeatedly to set.

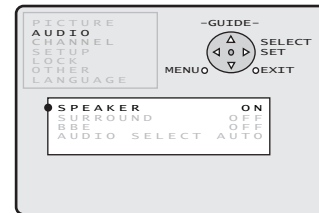
4



Press to exit menu.



### HDMI input



## Using BBE button.

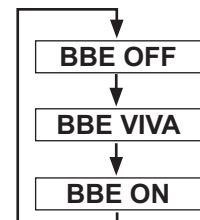


**BBE VIVA 3D** - BBE VIVA provides a musically accurate natural 3D image with hi-fi sound. The clarity of the sound is improved by BBE while the width, depth and height of the sound image are expanded by BBE's proprietary 3D sound processing. BBE VIVA is compatible with all TV programs including news, music, dramas, movies and sports as well as electronic games. BBE VIVA enhances the surround sound effect, while maintaining the clarity of dialogue.

**BBE** - Sound technology enhances speech intelligibility and restores the dynamic range of musical passages to provide outstanding natural sound.

### Note:

- If BBE is ON, SURROUND cannot be selected.



### Notes:

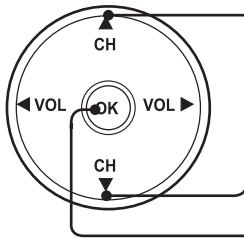
- Sound signals are output from the rear AUDIO OUT terminal.
- When volume is adjusted or the mute button is pressed from the Remote Control, a message will be displayed.
- If the AUDIO MENU is set to AUTO, or if BBE is ON, BASS and TREBLE cannot be adjusted.

# Picture Adjustments

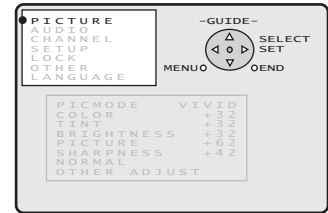


Press the MENU button to display the MENU screen.

1

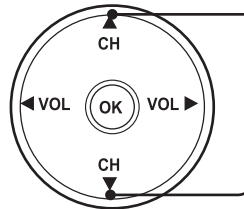


Press to select PICTURE.



Press to display PICTURE screen.

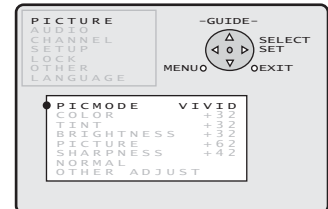
2



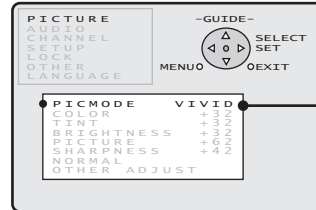
Press to select each item.

**Note:**

- NORMAL is displayed at default.

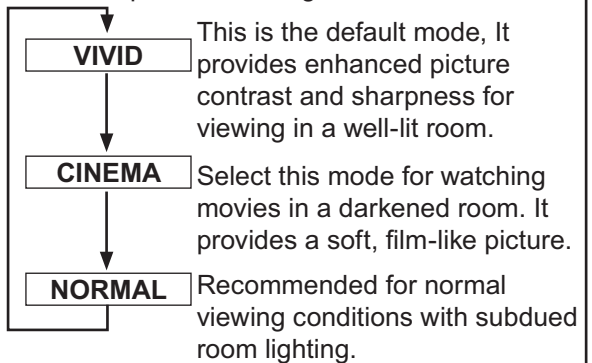


3



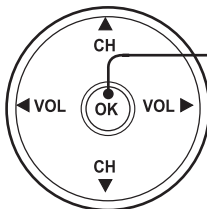
**PICMODE:**

Lets you choose one of three pre-set Picture Modes that best suits the program you are viewing. Selecting this feature will also affect Color Temperature setting.



**Note:**

- There is little change when PICTURE is increased with a bright picture or reduced with a dark picture.

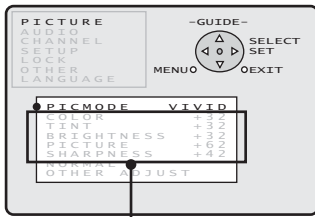


Press repeatedly to select PICMODE.

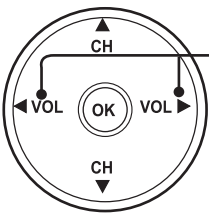
Continued on next page.



# Picture Adjustments



COLOR  
TINT  
BRIGHTNESS  
PICTURE  
SHARPNESS



Adjust to desired level while viewing picture through the menu overlay.  
Press the MENU button or wait a few seconds to return to the previous menu screen.



4

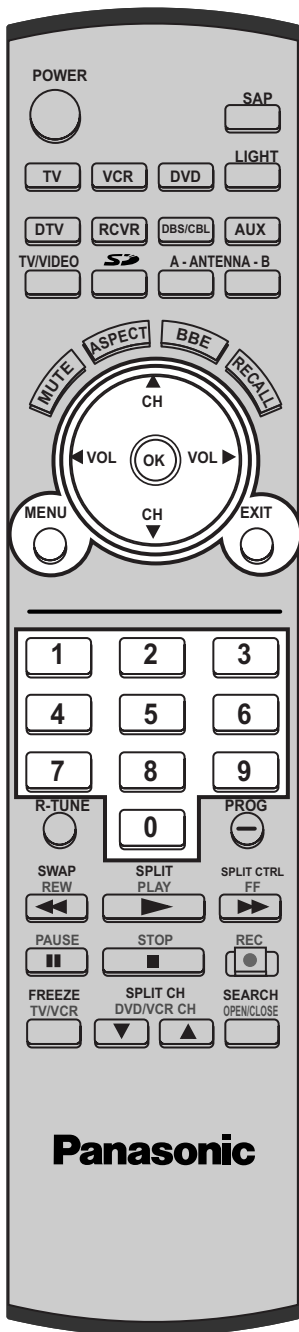


Press to exit menu.

Adjustment item	Button	Adjustment Details
COLOR	Press ► button.	The color becomes deeper.
	Press ◀ button.	The color becomes paler.
TINT	Press ► button.	Flesh tones become greenish.
	Press ◀ button.	Flesh tones become reddish.
BRIGHTNESS	Press ► button.	The screen becomes brighter.
	Press ◀ button.	The screen becomes darker.
PICTURE	Press ► button.	Picture intensity becomes stronger as both contrast and color levels are adjusted.
	Press ◀ button.	Picture intensity becomes weaker as both contrast and color levels are adjusted.
SHARPNESS	Press ► button.	The picture quality becomes sharper.
	Press ◀ button.	The picture quality becomes softer.

# Lock Feature

This projection display has a built-in V-Chip Control which allows you to block unwanted TV usage based on US MOVIES and US TV PROGRAMS ratings.

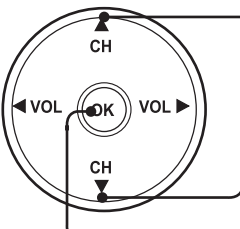


## Enter Secret Code

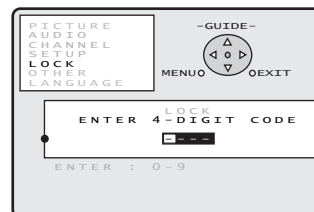
A 4-digit code must be entered to view a blocked program or change rating settings.

Press the MENU button to display the MENU screen.

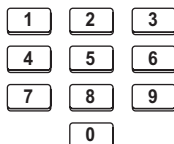
1



Press to select LOCK.



2

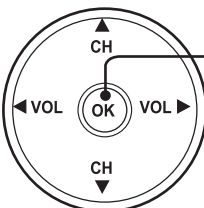
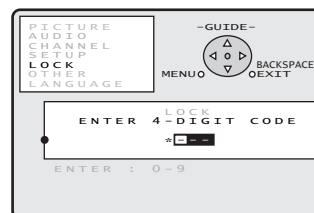


Press to display the LOCK screen.

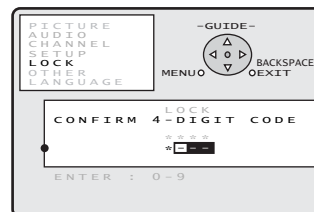
Press Number keys to enter your secret code.

### Note:

- To correct, press "◀" to backspace.



Press to save 4-digit code.

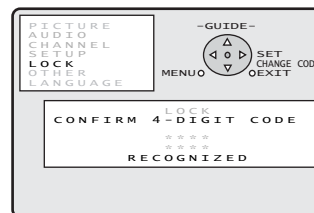


## Changing your secret code

- You will need your current code. With the OSD at right displayed, press "◀" to clear the current code. Repeat step 2 to enter a new code.

### Note:

- Use a code that is easy to remember and record it in a safe place.



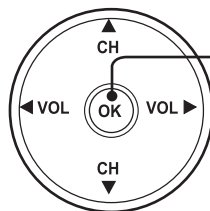
3



Press to exit menu.

Or

Or,



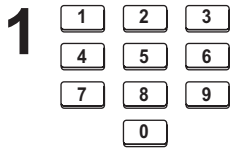
Press to display LOCK menu for rating screen and go to page 47 (US MOVIES Ratings), or page 48 (US TV PROGRAMS Ratings).

### Notes:

- Once ratings are set, restricted tapes or programs cannot be accessed unless the secret code is entered.
- If you forget your secret code, refer to "Reset User's Memory Functions" on page 49.

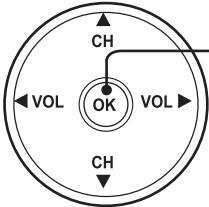
## Setup US MOVIES Ratings

Perform "Enter Secret Code" step 1 on page 46.



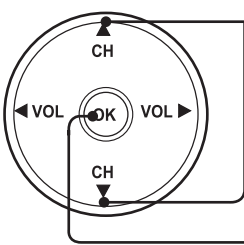
Press Number keys to enter your secret code.

+



Press to set.

**2**

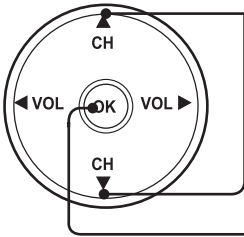


Press to select US MOVIES.

ON: V-Chip Control is activated.  
OFF: V-Chip Control is deactivated.

Press to set

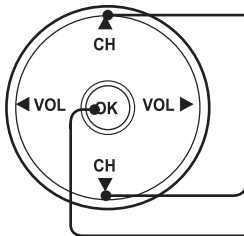
**3**



Press to select CHANGE SETTINGS.

Press to display the CHANGE SETTINGS screen.

**4**



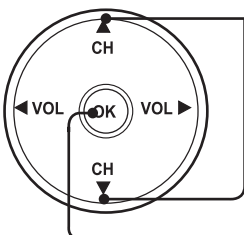
Press to select VIEW NR PROGRAMS?.

### VIEW NR (Not Rated) PROGRAMS

NO: Cannot view NR programs.  
YES: Can view NR programs.

Press to set "YES" or "NO".

**5**



Press to select ratings to be blocked. (P. 49)

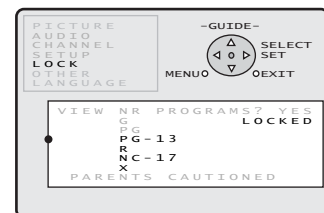
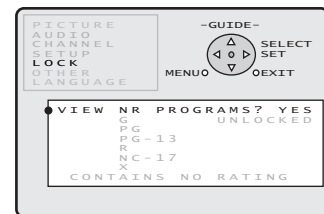
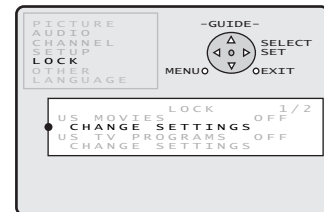
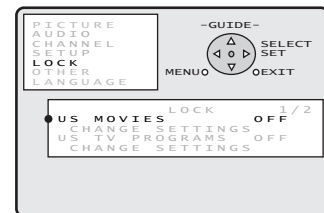
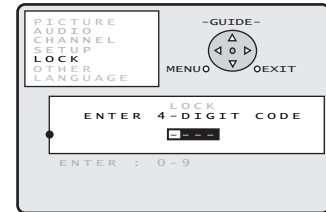
Press to set.

**6**

EXIT



Press to exit menu.



# Lock Feature



## Setup US TV PROGRAMS Ratings

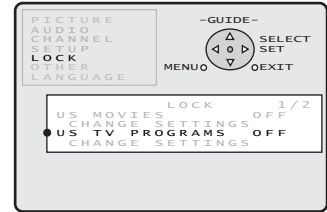
Perform "US MOVIES Ratings" step 1 on page 47.

**1**

Press to select US TV PROGRAMS.

Press to set.

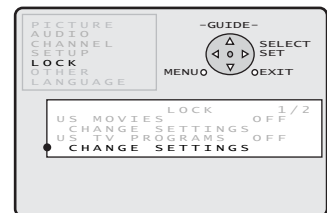
ON: V-Chip Control is activated.  
OFF: V-Chip Control is deactivated.



**2**

Press to select CHANGE SETTINGS.

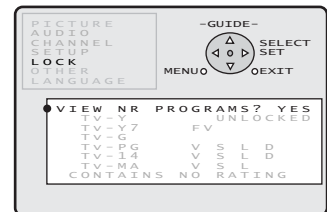
Press to display the CHANGE SETTINGS screen.



**3**

Press to select VIEW NR PROGRAMS?.

Press to set "YES" or "NO".



### VIEW NR (Not Rated) PROGRAMS

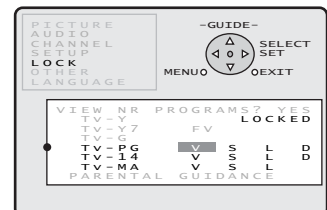
NO: Cannot view NR programs.

YES: Can view NR programs.

**4**

Press to select ratings to be blocked. (P. 49)

Press to set.



You may select from standard TV ratings (chart 1), or customize to a specific content rating (chart 2.)

### Note:

- Ratings highlighted in Red will be blocked while those not highlighted (black letters) will not be blocked.

**5**

Press to exit menu.

## US MOVIES RATINGS:

<b>G</b>	<b>GENERAL AUDIENCE:</b> All ages admitted.
<b>PG</b>	<b>PARENTAL GUIDANCE SUGGESTED:</b> Some materials may not be suitable for children.
<b>PG-13</b>	<b>PARENTS CAUTIONED:</b> Some materials may be inappropriate for children under 13.
<b>R</b>	<b>RESTRICTED</b> Children under 17 must be accompanied by a parent or adult.
<b>NC-17</b>	<b>OVER AGE 17 ONLY:</b> No one 17 and under admitted.
<b>X</b>	<b>ADULTS ONLY:</b>

## US TV PROGRAMS RATINGS: Chart 1

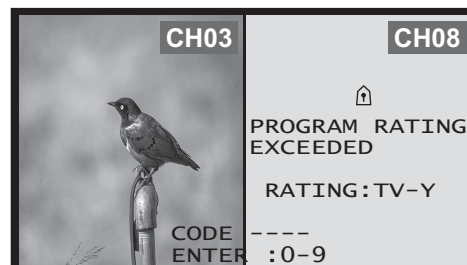
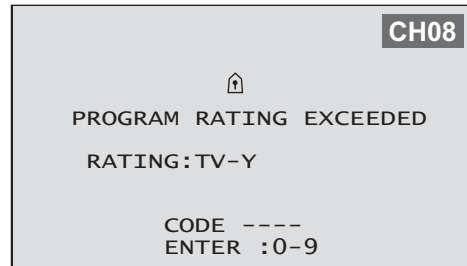
<b>TV-Y</b>	<b>FOR ALL CHILDREN:</b> Content specifically geared to young viewers ages 2-6.
<b>TV-Y7</b>	<b>FOR AGE 7 AND OLDER:</b> May contain mild physical or comedic violence which may frighten children under 7.
<b>TV-G</b>	<b>GENERAL AUDIENCE:</b> Contains little or no violence, strong language, or sexual dialogue or situations.
<b>TV-PG</b>	<b>PARENTAL GUIDANCE:</b> May contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
<b>TV-14</b>	<b>PARENTS CAUTIONED:</b> May contain sophisticated themes, sexual situations, strong language, and more intense violence.
<b>TV-MA</b>	<b>MATURE AUDIENCE:</b> May contain mature themes, profane language, graphic violence, and sexual situations.

## US TV PROGRAMS RATINGS: Chart 2

<b>FV</b>	<b>Fantasy Violence</b>
<b>V</b>	<b>Violence</b>
<b>S</b>	<b>Sexual Situations</b>
<b>L</b>	<b>Adult Language</b>
<b>D</b>	<b>Sexually Suggestive Dialogue</b>

## Blocking Message

<When V-Chip Control is activated>



### Temporarily deactivate V-Chip control

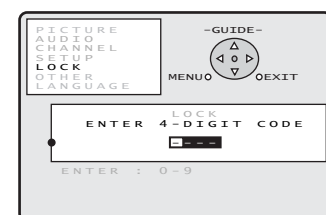
Enter your secret code in the blocking message screen.

- V-Chip control is reactivated when power is turned off or power failure occurs.

## Reset User's Memory Functions

Use when moving unit to a new location, or if the secret code is forgotten.

While the OSD at right is displayed, press the VOL- button on the projection display and OK button on the Remote control at same time for more than 5 seconds. When reset is finished, power shuts off automatically.



# Closed Captions

This receiver has a built in decoder that provides a visual depiction of the audio portion of a television program in the form of written words across the screen (white or colored letters on a black background). It allows the viewer to read the dialogue of a television program or other information.



**Panasonic**

## Note:

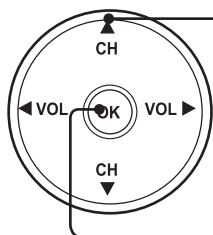
- The closed caption or text signal may be broadcast over C1, C2, or both. Also, text contents can vary so you may wish to try different settings.

## CAPTION MODE

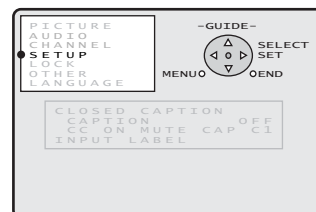
Activates the On-Screen Closed Caption feature. When activated this feature will remain on until OFF is selected in this menu.

Press the MENU button to display the MENU screen.

**1**

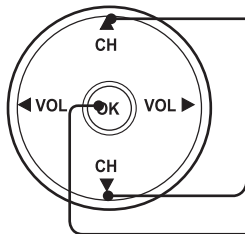


Press to select  
SETUP.

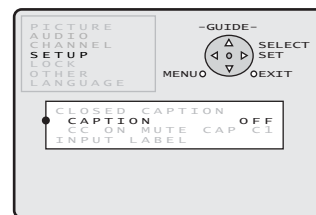


Press to display the  
SETUP screen.

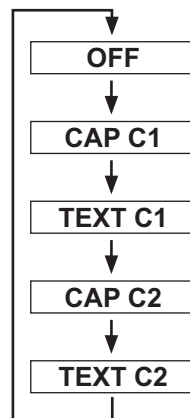
**2**



Press to select  
CAPTION.



Press repeatedly to  
select CAPTION.



## Closed Caption Modes from which to Choose

### Caption Mode: CAP C1 or C2

A narration of selected TV programs is displayed. Check TV program listings for C. C. (Closed Caption) broadcasts.

### Caption Mode: TEXT C1 or C2

The screen will be blocked out. When the TV station broadcasts information, such as program listings, it will appear in this space.

### Caption Mode: OFF

Closed Caption /Text narration will not be displayed.

**3**



Press to exit menu.

## CC ON MUTE

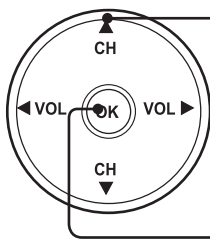
Activates the On-Screen Closed Caption feature, when the MUTE button on the Remote Control is pressed. To deactivate, press the MUTE button again.

### Note:

- This feature functions when the Closed Caption Mode is in the "OFF" position. The program being viewed must be broadcast with Closed Caption.

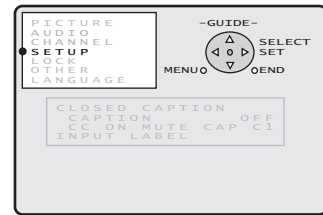
Press the MENU button to display the MENU screen.

1

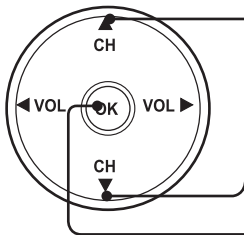


Press to select  
SETUP.

Press to display the  
SETUP screen.

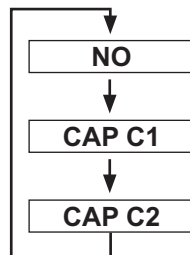
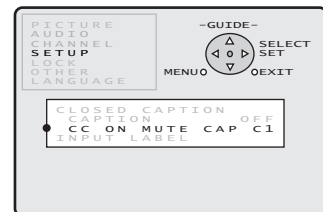


2



Press to select  
CC ON MUTE.

Press repeatedly to select  
CC ON MUTE.



3



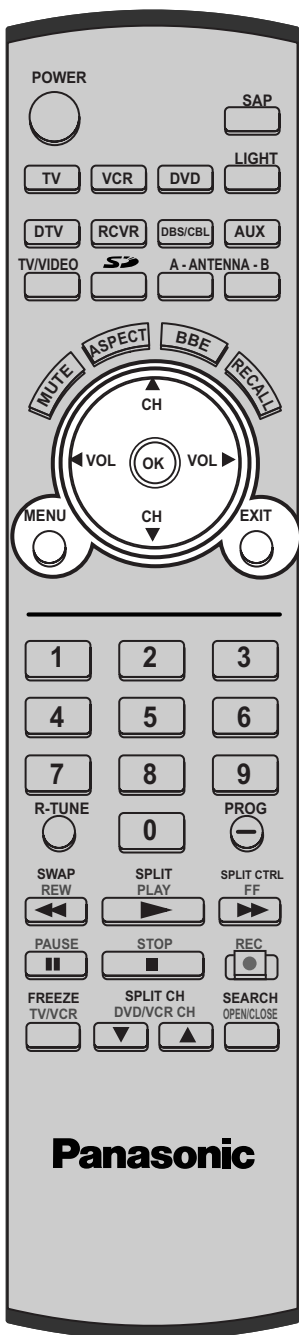
Press to exit menu.

### Notes:

- The setting for CC ON MUTE is valid only when the CC MODE is OFF, CC MODE set to ON will override CC ON MUTE.
- Closed Caption is not displayed if the input signal is COMPONENT VIDEO INPUT of 480p or more, or from RGB IN.

# Input Label

To label video input connections for on-screen display.

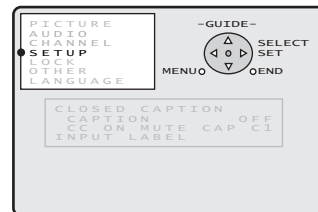


Press the MENU button to display the MENU screen.

**1**

Press to select SETUP.

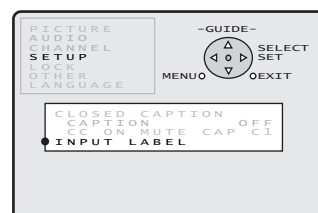
Press to display the SETUP screen.



**2**

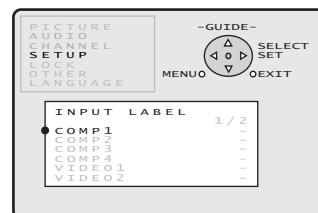
Press to select INPUT LABEL.

Press to enter INPUT LABEL listed.



**3**

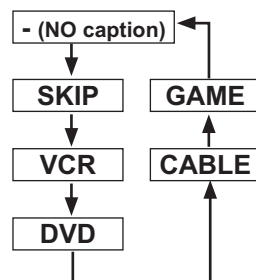
Press to select inputs.



**4**

Press to select preset Input Labels for inputs.

Input Labels that are set to SKIP cannot be selected when changing input modes with the TV/VIDEO button, etc.



**5**

Press to select another input, then repeat procedure for adding more labels to inputs.

**6**

Press to exit menu.



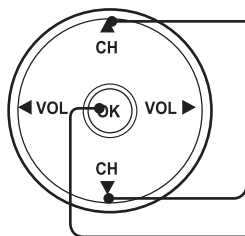
# Channel Caption Feature

Station names, e.g. ABC, TNN, etc. so that they will appear when a channel is selected. Choose 24 preset names.

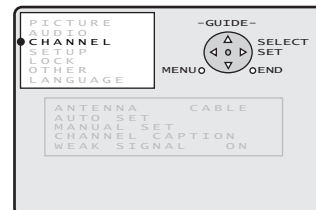


Press the MENU button to display the MENU screen.

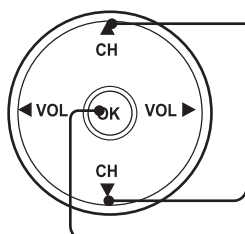
1



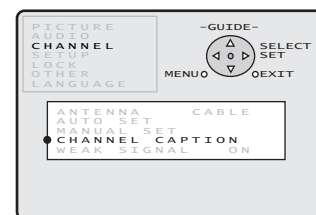
Press to select CHANNEL.



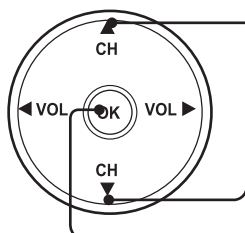
2



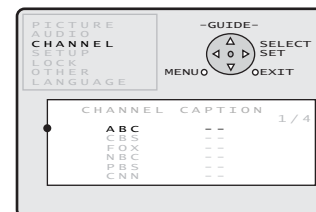
Press to display the CHANNEL screen.



3



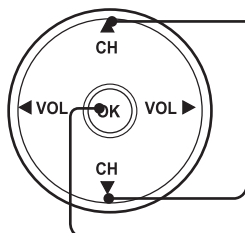
Press to select a station.



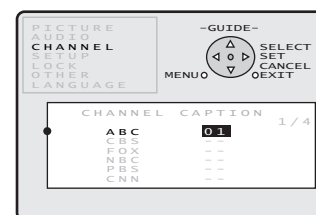
Press to move cursor to the right.

To remove a registered channel number, select the station, then press the ◀ button (CLEAR).

4



Press to select channel number.



Press to set.

To make a correction, press the ◀ button.

- Repeat steps 3 and 4 until the Caption List is complete.

5



Press to exit menu.

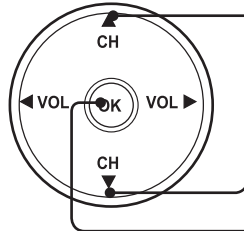
# Weak Signal Display Feature

When "ON" is selected, the picture is displayed even when a broadcast signal is weak or non-existent.



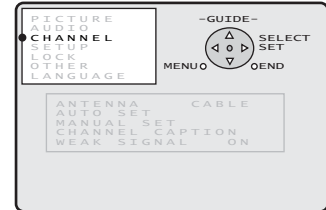
Press the MENU button to display the MENU screen.

1

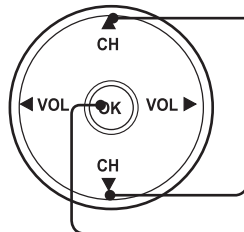


Press to select CHANNEL.

Press to display the CHANNEL screen.

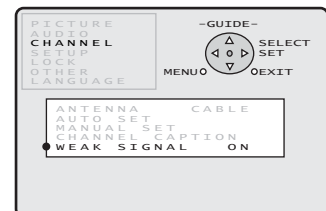


2



Press to select WEAK SIGNAL.

Press to set "ON" or "OFF".



ON: Picture is displayed regardless of signal condition, and may not always be clearly visible.

OFF: Screen turns solid blue when signal is absent or weak.  
(Screen turns solid black during SPLIT functions.)

3



Press to exit menu.

## Note:

- If unit is connected to equipment which has blue back feature, selecting "ON" will have no effect on the other equipment.

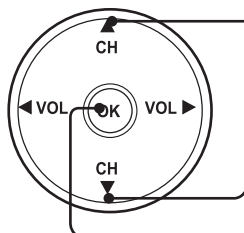
# Color Temp Feature

To increase or decrease Warm (red) and Cool (blue) colors to suit personal preferences.

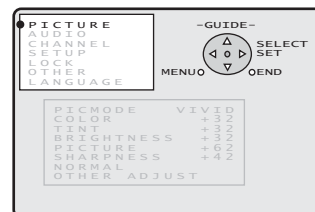


Press the MENU button to display the MENU screen.

1

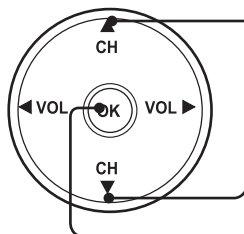


Press to select PICTURE.

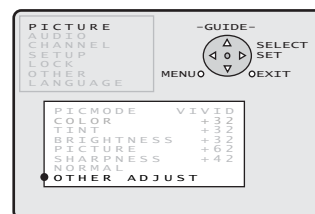


Press to display the PICTURE screen.

2

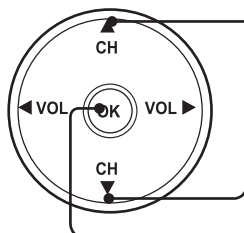


Press to select OTHER ADJUST.

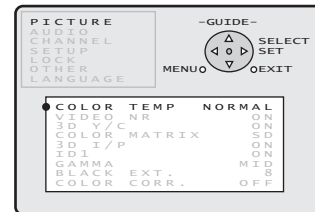


Press to display the OTHER ADJUST screen.

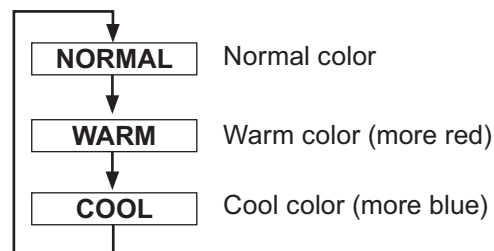
3



Press to select COLOR TEMP.



Press to set .



4



Press to exit menu.

## Note:

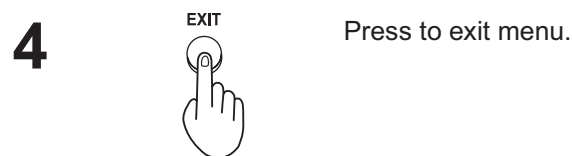
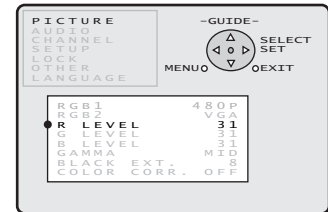
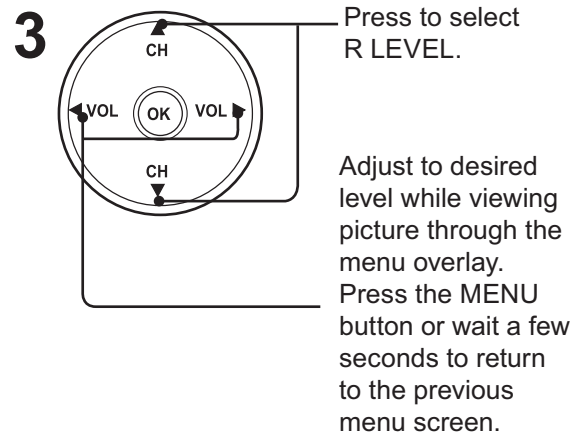
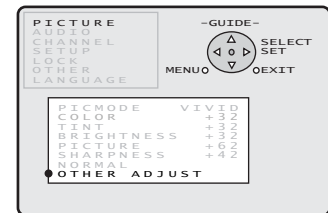
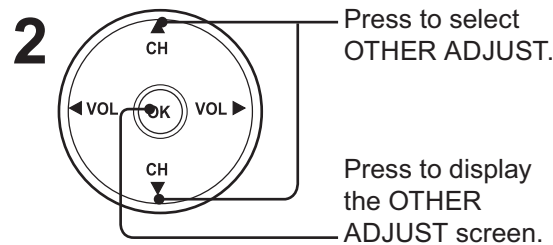
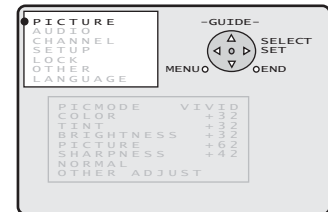
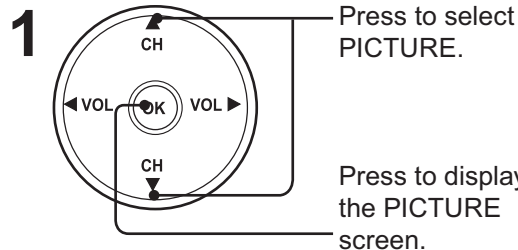
- During RGB input, Color Temp changes to Normal.

# RGB Level Feature (RGB input only)

If the picture has a reddish or blueish tint, or if the whiteness is not at the desired level, you can adjust the white balance. (The following steps show R Level adjustment.)



Press the MENU button to display the MENU screen.



Adjustment item	Button	Adjustment Details	Remarks
R LEVEL	Press ► button.	The red component becomes stronger.	RGB IN only
	Press ◀ button.	The red component becomes weaker.	
G LEVEL	Press ► button.	The green component becomes stronger.	
	Press ◀ button.	The green component becomes weaker.	
B LEVEL	Press ► button.	The blue component becomes stronger.	
	Press ◀ button.	The blue component becomes weaker.	

## Note:

- If adjustments are not done correctly, all colors will become abnormal.

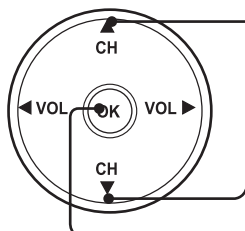
# Video NR (Noise Reduction) Feature

In the event of weak signal conditions, the Video NR circuitry reduces noise in the luminance channel. It is important to note that Video NR should remain OFF for maximum picture detail when receiving a strong signal or viewing high-quality video.

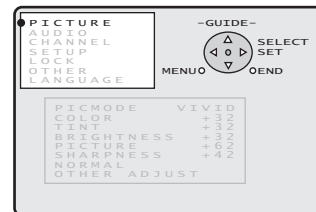


Press the MENU button to display the MENU screen.

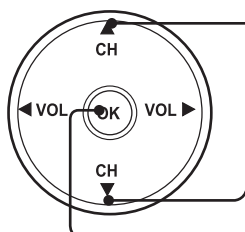
1



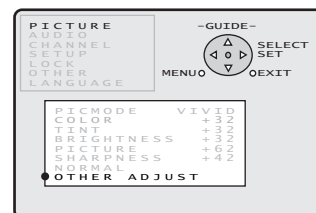
Press to select PICTURE.



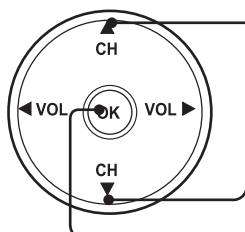
2



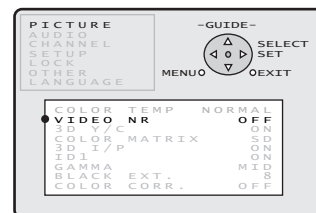
Press to display the PICTURE screen.



3



Press to select VIDEO NR.



Press to set "ON" or "OFF".

ON: When signal is noisy  
OFF: When signal is high-quality

4



Press to exit menu.

## Note:

- When an RGB signal is input, VIDEO NR is set to OFF only.

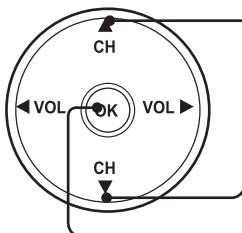
# Automatically changing screen size

If the received signal contains screen size specifications in RF, VIDEO INPUT (1–3) or COMPONENT VIDEO INPUT (1–4), the screen size is automatically changed.

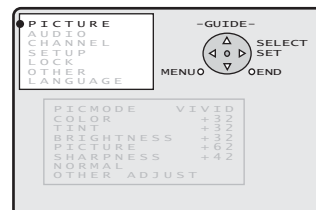


Press the MENU button to display the MENU screen.

1

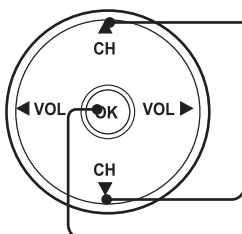


Press to select PICTURE.

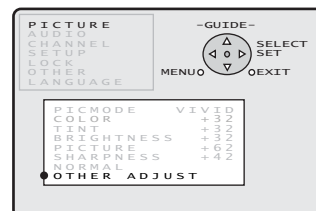


Press to display the PICTURE screen.

2

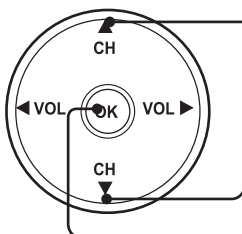


Press to select OTHER ADJUST.

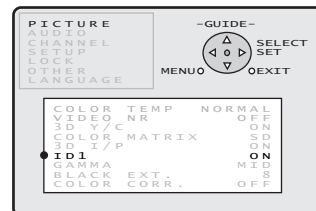


Press to display the OTHER ADJUST screen.

3



Press to select ID1.



Press to set "ON" or "OFF".

ON: When screen size specification signals are detected, screen size is automatically changed.

OFF: The screen size is not automatically changed.  
(Turn OFF if this function does not operate properly.)

4



Press to exit menu.

## Notes:

- When ID1 is detected and screen size is changed, Aspect mode will be displayed.
- When displaying split screen, ID1 is not detected.

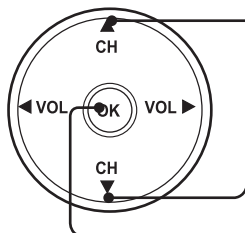
# Setting when 480p signals are input through COMPONENT VIDEO INPUT

Adjust 480p signals to achieve a natural color from digital equipment connected to COMPONENT VIDEO INPUT (Y, PB, PR input terminals).

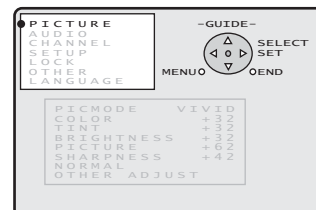


Press the MENU button to display the MENU screen.

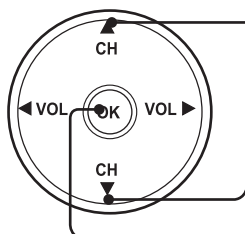
1



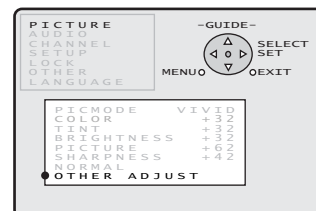
Press to select PICTURE.



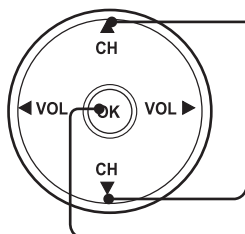
2



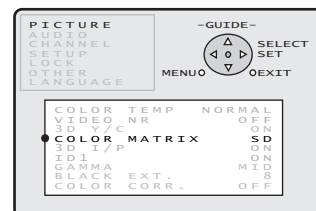
Press to display the OTHER ADJUST screen.



3



Press to select COLOR MATRIX.



Press to set "SD" or "HD".

SD : When the input signal is a normal TV system (NTSC).

HD : When the input signal is a High-Definition system (HD).

4



Press to exit menu.

## Note:

- 480p COLOR MATRIX does not need to be set when using Hi-Definition equipment or 480i output equipment.

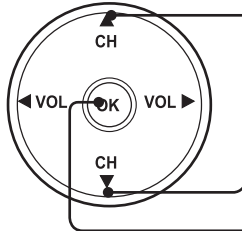
# RGB Input Feature

Set the signal to be input to the projection display's RGB IN terminal. Most of analog RGB IN signals are selected automatically. When RGB input signal is VGA 60Hz from PC or 480P from other equipment, you must manually switch to the desired input.

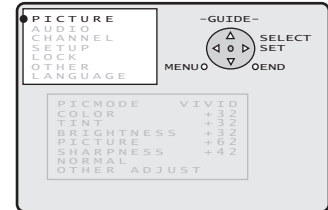


Press the MENU button to display the MENU screen.

1

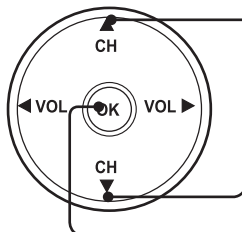


Press to select PICTURE.

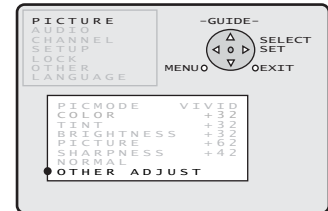


Press to display the PICTURE screen.

2



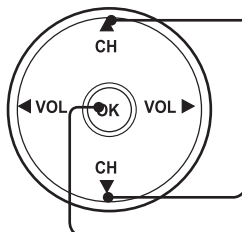
Press to select OTHER ADJUST.



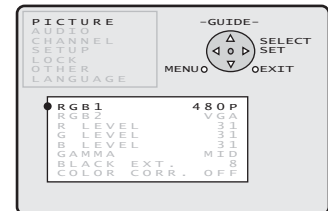
Press to display the OTHER ADJUST screen.

(For PT-50LC14/PT-60LC14)

3

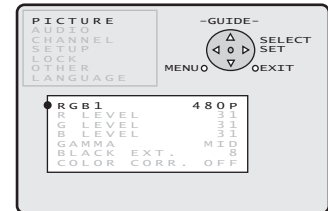


Press to select desired RGB input.



Press to set "VGA" or "480P".

(For PT-43LC14)



VGA : When RGB input signal is VGA 60Hz from PC.

480P : When RGB input signal is 480P from other equipment.

4



Press to exit menu.



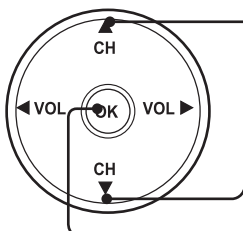
# 3D Y/C Feature

Accurate separation of the picture's brightness and color signals allows you to enjoy a beautiful picture.

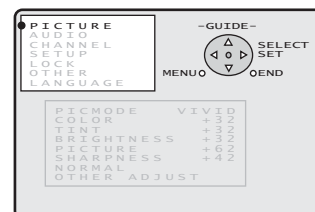


Press the MENU button to display the MENU screen.

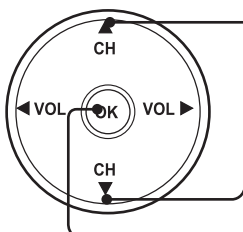
1



Press to select PICTURE.

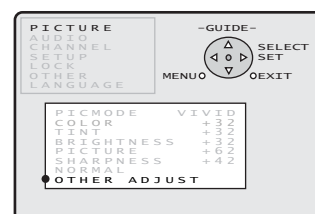


2



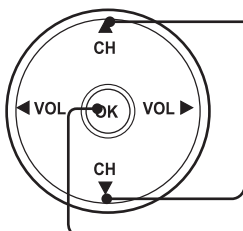
Press to display the PICTURE screen.

Press to select OTHER ADJUST.



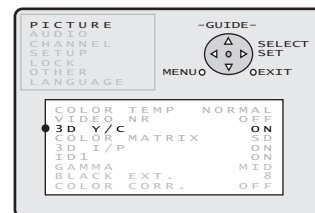
Press to display the OTHER ADJUST screen.

3



Press to select 3D Y/C.

Press to set "ON" or "OFF".



ON: Usually set to ON.

OFF: Set to OFF if picture appears unnatural.

4



Press to exit menu.

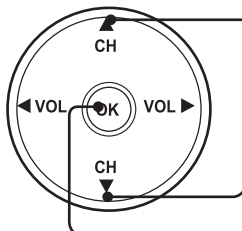
# 3D IP Feature

Film media (taken at 24 frames per second) is faithfully reproduced on the projection display.

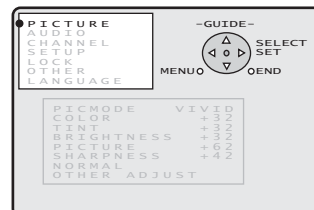


Press the MENU button to display the MENU screen.

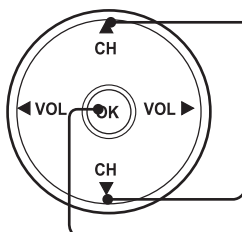
1



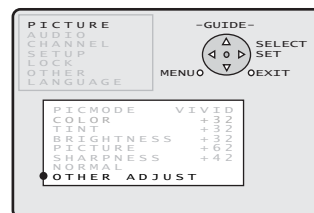
Press to select PICTURE.



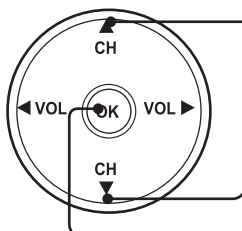
2



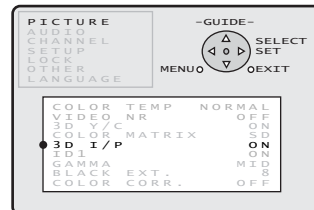
Press to select OTHER ADJUST.



3



Press to select 3D I/P.



Press to set "ON" or "OFF".

ON: Recordings created at 24 frames per second are shown in higher quality.

OFF: Set to OFF if picture appears unnatural.

4



Press to exit menu.

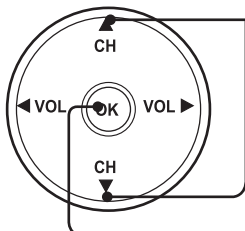
# GAMMA Adjust Feature

The median brightness level of the picture can be set.

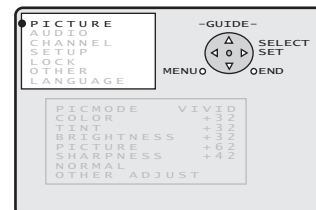


Press the MENU button to display the MENU screen.

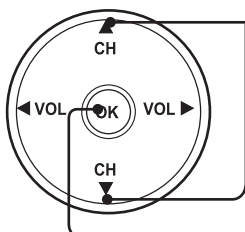
1



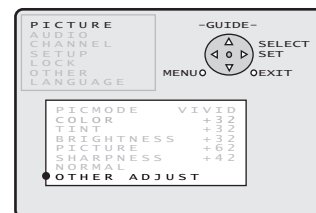
Press to select PICTURE.



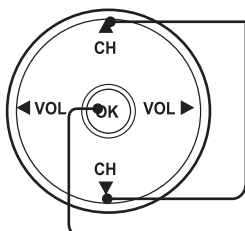
2



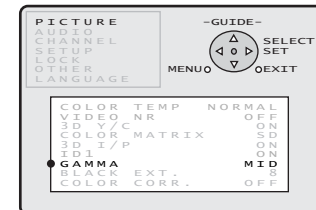
Press to select OTHER ADJUST.



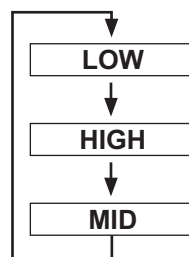
3



Press to select GAMMA.



Press repeatedly to select the desired GAMMA.



LOW : Median brightness is reduced.  
HIGH : Median brightness is increased.  
MID : Standard picture.

4



Press to exit menu.

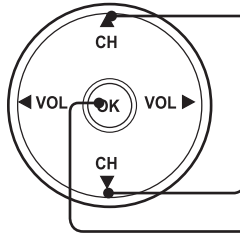
# Black Extension Feature

You can adjust the gray level of black for areas of the screen that are darker than the median level.

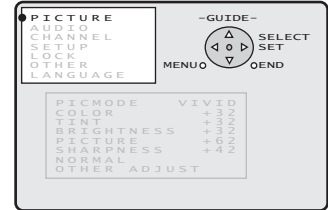


Press the MENU button to display the MENU screen.

1

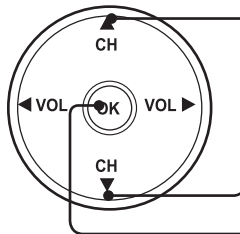


Press to select PICTURE.

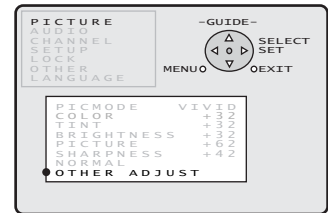


Press to display the PICTURE screen.

2

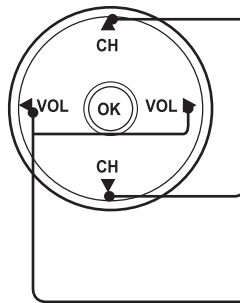


Press to select OTHER ADJUST.

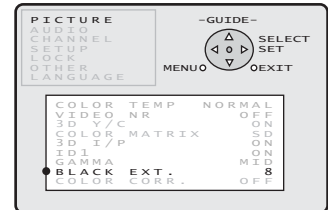


Press to display the OTHER ADJUST screen.

3



Press to select BLACK EXT..



Adjust to desired level.

4



Press to exit menu.

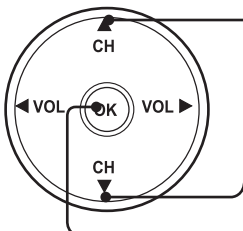
# Color Correct Feature

With HDMI connection, depending on the signal, the picture may be displayed with unnatural colors (as if red and blue are reversed). Correct by setting the COLOR CORR. to Invert.

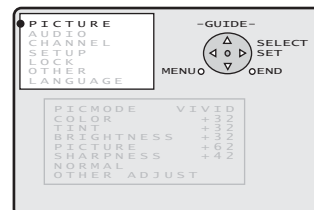


Press the MENU button to display the MENU screen.

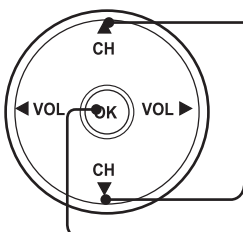
1



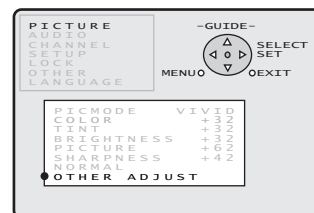
Press to select PICTURE.



2



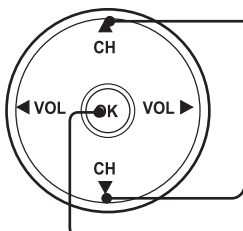
Press to display the PICTURE screen.



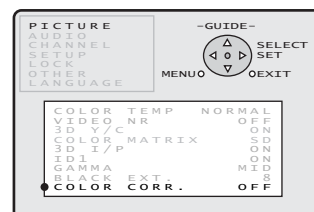
Press to select OTHER ADJUST.

Press to display the OTHER ADJUST screen.

3



Press to select COLOR CORR..



Press to set "ON" or "OFF".

ON: Set to ON if picture appears unnatural.

OFF: Usually set to OFF.

4



Press to exit menu.

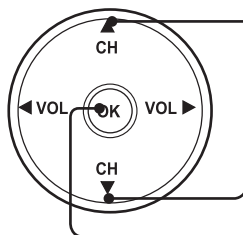
# Sleep Timer Feature

The projection display can be set to shut itself off at a preselected time.

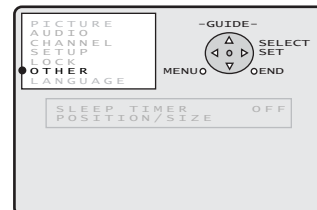


Press the MENU button to display the MENU screen.

1

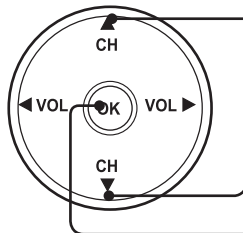


Press to select OTHER.

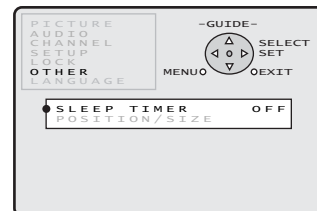


Press to display the OTHER screen.

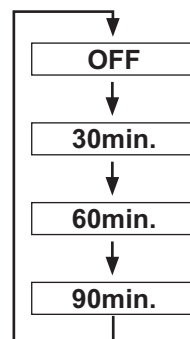
2



Press to select SLEEP TIMER.



Press repeatedly to select the desired time.



3



Press to exit menu.

## Notes:

- Pressing RECALL with sleep timer set displays remaining time.
- Minutes remaining is displayed for the last 3 minutes before shutoff.

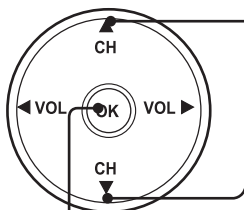
# Switching languages for display

The language of the projection display is set to English as the factory setting. To select one of 3 different languages for on-screen displays, follow the instructions below.

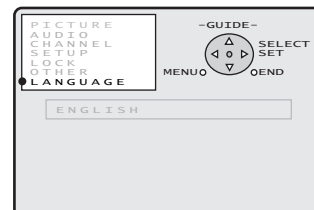


Press the MENU button to display the MENU screen.

1

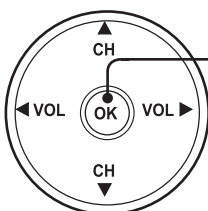


Press to select LANGUAGE.

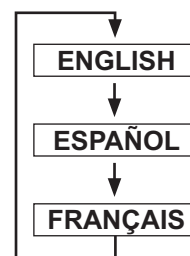
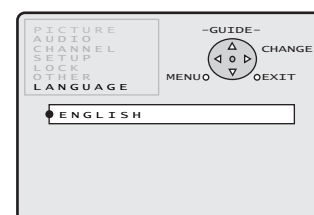


Press to display LANGUAGE screen.

2



Press repeatedly to select the desired LANGUAGE.



3



Press to exit menu.

# Photo Viewer (SD Card/PC Card)

Still image data (JPEG) made with a digital camera, digital video camera, or PC can be played back using an SD Card/PC Card.

## WARNING

As with any small object, SD cards can be swallowed by young children. Do not allow children to handle the SD card.

### Displayable Image Formats:

Baseline JPEG

(80 x 60 ~ 5 120 x 3 840 pixels)

### Notes:

- Some parts of an image may not be displayed or the image may be displayed on a smaller scale depending on the size of the image.
- Only JPEG images can be displayed on this Projection display.
- Photo Viewer may not work with some Cards.

### Card Data Protection

- Do not remove the card while it is being accessed.
- Do not touch the terminals on the back of the SD Card/PC Card.
- Electrical interference, electrostatic discharges and malfunctions of the unit or card may all result in damage to the card or data loss. It is recommended that any important data also be backed up on a PC.
- Stored data should be periodically backed up as a protection against data corruption, data loss or device malfunction. Please note that our company shall not accept any liability for damage or loss of stored data.

### Caution

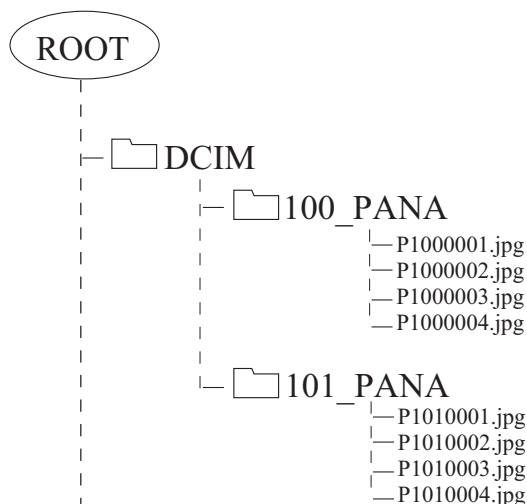
- Always insert card in the correct direction. Failure to do so may result in damage to the card and this unit.
- The SD Card and PC Card are precision devices. Do not subject them to excessive pressure or strong impacts.

### Folders and Files

Digital cameras that are compliant with DCF specifications use folders with a specific structure. The following diagram shows an example of the folder structure.

#### Example:

If the Card file hierarchy is displayed on the PC as shown in diagram at below.



### DCIM Folder

The digital camera creates this folder automatically.

### 100\_PANA Folder

Folder names consist of a 3-digit folder number which is followed by five arbitrary characters. Digital camera images are stored within these folders.

JPEG files in the 100\_PANA folder are displayed when a Card, which is structured as shown left, is inserted. To display another folder, see page 70 Index Area Operation.

### Note:

- The folder and file name may vary according to the digital camera being used.

### P1000001.JPG: DCF File

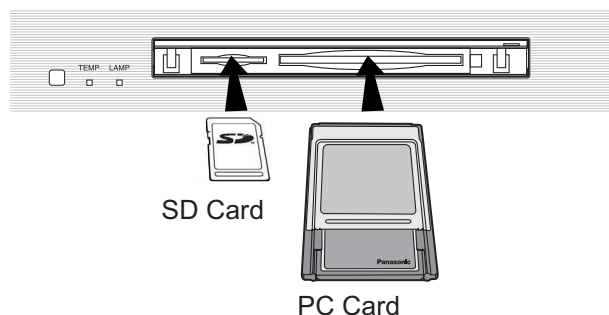
File names consist of four arbitrary characters followed by a 4-digit file number. DCF files are image files (normally JPEG files) that have been taken by a digital camera.



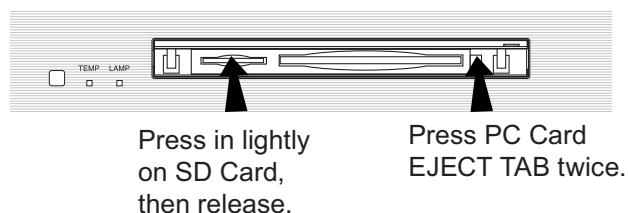
# Photo Viewer (SD Card/PC Card)

## Insert the Card.

Front Card Slot (P. 10)



## Remove the Card.



## Compatible Card

SD Card slot	PC Card slot
SD Card	Compact Flash*
MultiMediaCard	Smart Media*
	Memory Stick*
	xD Picture Card*

- The media\* listed in the right column above can be read via the PC Card in the PC Card adaptor.
- Hard disk PC Cards, Flash ATA Cards, and other recorded media cannot be used.
- Place the selected media onto the PC Card and then insert into the PC Card Slot.
- When both an SD Card and PC Card are inserted, the SD Card contents has priority and will be displayed.
- If the Card is unusable, "CARD FORMAT NOT SUPPORTED" is displayed on-screen. Remove the Card only when ACCESS is not displayed.
- If an incompatible JPEG file is displayed (full size file preview), "DATA FORMAT NOT SUPPORTED" is displayed.

## Notes:

- Insert/remove Card while "Card Menu Screen" or "NO CARD" is displayed.
- Be sure ACCESS is not displayed before Card insertion/removal.
- Fully insert the Card (ACCESS is displayed). Wait until ACCESS goes out before removing.
- Before reinserting a Card after removing it, wait until "NO CARD" is displayed. If there are Cards in both Card Slots, wait until the Card Menu Screen of the other Slot is displayed and ACCESS is no longer displayed before reinserting a Card.

## Card Menu Screen

The screen below is displayed automatically when a card is inserted. If "NO CARD" appears, confirm that a card is correctly inserted.

**Parent Folder**  
Returns currently displayed folder to the parent (previous) folder.

**Menu Area**  
Select display method (SINGLE PLAY or SLIDE SHOW). Confirm the displayed card type (SD Card or PC Card).

**Subfolder**  
The subfolder of the currently displayed folder is opened.

**Folder Name Area**  
The name of the selected subfolder (framed in yellow) is displayed.

**Display Page No.**  
When the displayed files/folders fill more than one page, the total number of pages is displayed.

**Index Area**  
Folders and files are displayed here.

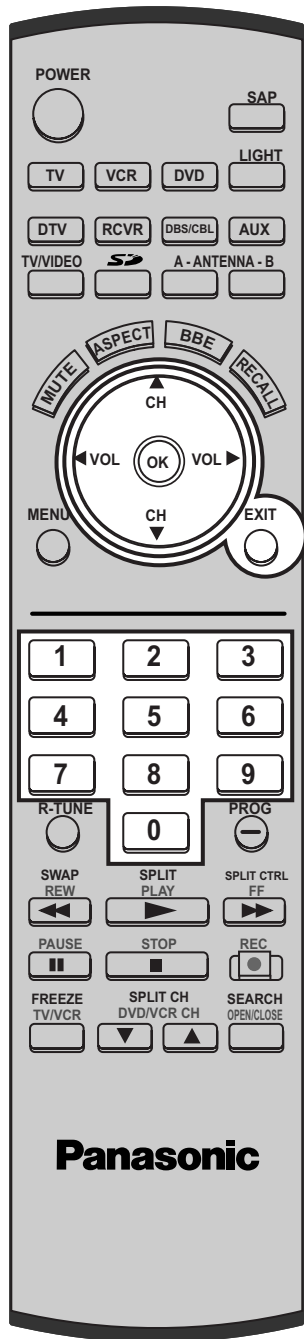
The screenshot shows a menu with options: -MENU-SINGLE SLIDE, SD/PC, SELECT SET, EXIT, and PAGE. Below the menu is a grid of thumbnails. A yellow box highlights the 'JPG' thumbnail in the bottom right of the grid. The folder name '200\_PANA' is displayed below the grid. The page number 'PAGE: 1/6' is displayed at the top right. The word 'ACCESS' is displayed at the bottom left.

**ACCESS Indication**  
ACCESS is displayed while data is read.

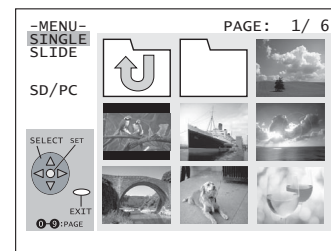
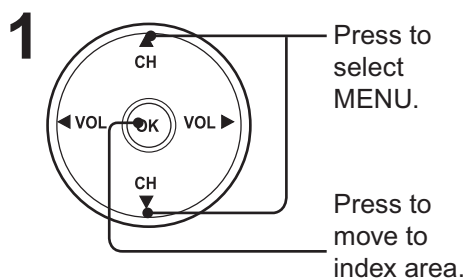
**Notes:**

- Up to 1 000 JPEG files can be displayed. (This number may be lower if subfolders, or files other than JPEG are included in the folder.)
- Depending on JPEG file type, "JPEG" will be displayed instead of thumbnail image.
- Only JPEG files can be displayed.

# Photo Viewer (SD Card/PC Card)



## MENU Area Operation



### SINGLE

A single image selected from the index area fills the screen. You can also rotate the image and view image information. (PP. 71-72)

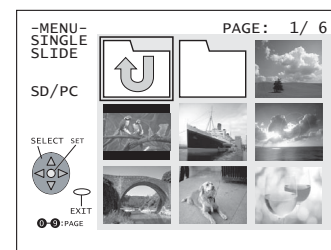
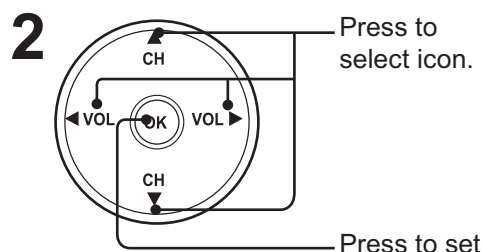
### SLIDE

Images are displayed one after another as a slide show. Also, the SPEED and Transition features (p. 72) can be used.

### SD/PC

When both an SD Card and PC Card are inserted, the ◀▶ buttons can be used to select a card in the index area.

## Index Area Operation



To select a page directly, enter the page number with the Number Keys, then press OK.

### Select an Image file.

Display full size file preview.

### Select a Subfolder (📁).

Display files/folders contained in the folder.

### Select a Parent folder (🔍).

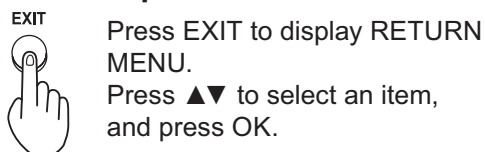
Make changes to the parent (previous) directory display.

### **Note:**

File and folder names will not be displayed correctly if...

- More than 8 characters are used.
- Spaces and special symbols are used. Use care when changing file and/or folder names.

## RETURN Operation

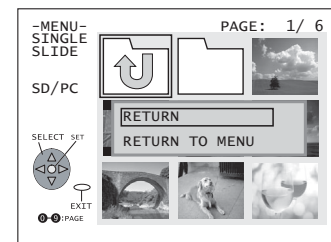


### **RETURN:**

Returns to the parent (previous) folder.

### **RETURN TO MENU:**

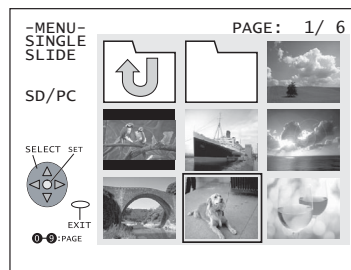
Returns to Menu Area screen.



# Photo Viewer (SD Card/PC Card)

## Single Play Mode

- 1 Press ▲▼ to select "SINGLE," and press OK.  
Press ▲▼◀▶ to move cursor to desired file in INDEX AREA.  
(Press ▲▼◀▶ to display next/previous page of 9 thumbnail files),  
Press OK to display file in full screen size.



SINGLE VIEW SCREEN

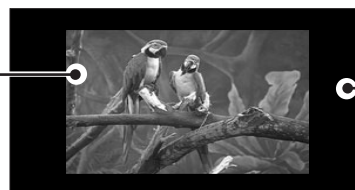
Card Menu  
screen Area



Monitor  
Screen Area

Example: Aspect 4:3 picture

Card Menu  
screen Area



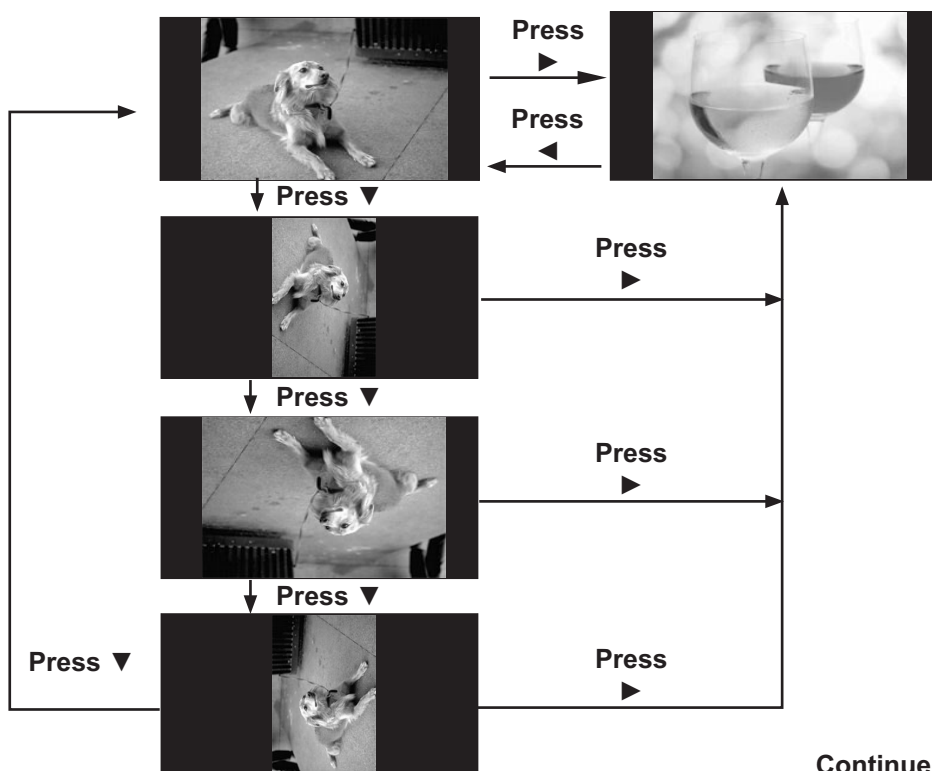
Monitor  
Screen Area

Example: Aspect 16:9 picture

- Press ► : The next image is displayed.  
Press ◀ : The previous image is displayed.  
Press ▼ : Each press rotates image 90°.

### Note:

- When changing folders or images, the rotation setting is returned to the initial position.







Continued in left column of next page.

# Photo Viewer (SD Card/PC Card)

Continued from page 71.

## ZOOM SETTING

A Single View Screen can be changed from Normal Screen Mode to Zoom Screen Mode by pressing ASPECT. The picture will fill the entire screen. To return to normal screen, press ASPECT again.

	NormalScreenMode	ZoomScreenMode
4:3 PICTURE		
16:9 PICTURE		

## Information Screen Display

Press OK: INFORMATION SCREEN is displayed.  
(Rotation angle is maintained.)

Information Screen



Pressing EXIT returns to SINGLE VIEW SCREEN.

### Note:

- If a file name exceeds 8 characters, a file name different from the original is displayed.

## Picture Adjustment

When OK is pressed while the Information Screen is displayed, the Picture Adjust menu (p. 44) is displayed. (Rotation angle is maintained.)

Picture Adjust menu

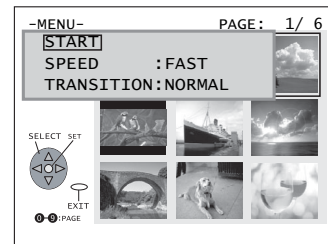


Pressing EXIT returns to SINGLE VIEW SCREEN.

- Press EXIT with SINGLE VIEW screen displayed to return to the Index Area menu.

## Slide Show Mode

- Press ▲▼ to select "SLIDE," and press OK. Press ▲▼◀▶ to move cursor to desired file in Index Area.  
(Press ▲▼◀▶ to display next/previous page of 9 thumbnail files).  
Press OK to display SLIDE MENU.  
Press ▲▼ to select an item, and press OK repeatedly to set.



[START]  
Starts slide show.

[SPEED]  
FAST:  
Image transition every 2 seconds.  
MEDIUM:  
Image transition every 5 seconds.  
SLOW:  
Image transition every 10 seconds.

### Note:

- The display intervals of 2, 5, and 10 seconds do not include file data reading time. The display interval becomes longer depending on the JPEG size.

[Transition]  
NORMAL:  
Image transition one by one.  
WIPE:  
Image transition from top to bottom.  
BLIND:  
Image transition in a series of band-like shapes that resemble window blinds.

- START SLIDE SHOW.



Press OK to stop or resume slide show.

- Press EXIT to exit this mode.

# Replacing the lamp unit

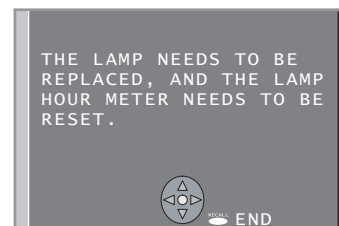
The lamp unit is sold separately. To purchase a replacement, call the Panasonic accessory department, toll free at: 1-800-332-5368.

Lamp unit Part No. : TY-LA1000

## Lamp unit replacement period

The Lamp is a consumable item and its life varies based on individual usage. Panasonic warranties the original Lamp for a period of 1 year from the date of purchase.

- The unit will detect when the Lamp's end of life is approaching and the following message will be displayed.
- The LAMP indicator light will be lit when the Lamp's end of life is approaching.



Influences of frequent lighting, continuous light use for over 24 hours, the number of times lit, the length of time between lightings, etc. may shorten lamp life.

(Because of this, we recommend having a replacement lamp on hand.)

## WARNING

**Failure to follow these warnings when replacing the lamp unit could result in personal injury:**

- 1) The high-pressure lamp could explode if not properly handled and lamp fragments could cause injury.
- 2) Because the temperature of the lamp unit is elevated immediately after its use, touching it may cause burns. Please allow the lamp to cool before handling or replacing the lamp unit.
- 3) Handle the old lamp unit carefully. It can explode if not handled with care.
- 4) Wear gloves and safety eyeglasses when replacing the lamp unit.
- 5) If replacement of the lamp unit becomes necessary during the operation of the TV, follow the procedure below.
  - a. Press the POWER button on the remote control unit to turn off the power.
  - b. Wait for about 1 minute until the cooling fan stops.
    - The lamp cooling fan will continue to operate for about 1 minute after turning off the power. Do not unplug the power cord from the outlet until the fan has stopped. Avoid interrupting the power line by using circuit breakers or switchable power strips.
  - c. After the cooling fan has stopped, Unplug the power cord from the outlet.

- Please wait more than one hour for lamp replacement.  
[ If you need to replace the lamp more urgently ]
- The projection display has a forced cooling feature. After the POWER button is turned OFF, and sometime during about the first minute of the normal cooling fan operation, press the VOL+ button on the projection display and the ▲ button on the Remote control at same time for more than 5 seconds. The cooling fan operates for about 10 minutes.

**Refer to the instructions enclosed with the lamp unit (Part No.: TY-LA1000) when replacing the lamp.**

# Warning Indicators

This unit has indicators (lights on the front) to let you know the unit's internal condition. (See page 10)  
Depending on the condition, the Lamp, Power, or Temp indicator will flash to alert you. In this case, turn unit off and follow the measures below.

	Indicator	Symptom	Problem	Possible Solution
Temp Indicator	Flashes red 1 or 3 times every 5 seconds.	Power shuts off.	Malfunction	Contact a service center.
	Flashes red 2 or 4 times every 5 seconds.	Power shuts off.	Internal overheat error.	Wait a while, then turn unit back on.
	Flashes red 5 times every 5 seconds.	Power shuts off.	Malfunction	Contact a service center.
Lamp Indicator	Lights solid red.	OSD appears every time power is turned on.	Maximum Lamp life hours exceeded.	Replace Lamp
	Flashes red 1 time ever 5 seconds.	Power shuts off.	Lamp will not light or light is abnormal.	Try turning Power On several times. If error persists, contact service center.
	Flashes red 2 times every 5 seconds.	Power shuts off.	Lamp voltage is abnormal.	Contact service center.
	Flashes red 3 times every 5 seconds.	Power shuts off.	Lamp temperature is too high.	Contact service center.
	Flashes red 4 times every 5 seconds.	Power shuts off.	Other error.	Contact service center.
Power Indicator	Flashes orange 1 time every 5 seconds.	Power shuts off.	The internal cooling fan is not working.	Contact service center.
	Flashes orange 2 times every 5 seconds.	Power shuts off.	The Lamp Cover is unsecured.	Securely attach Lamp Cover.

## Note:

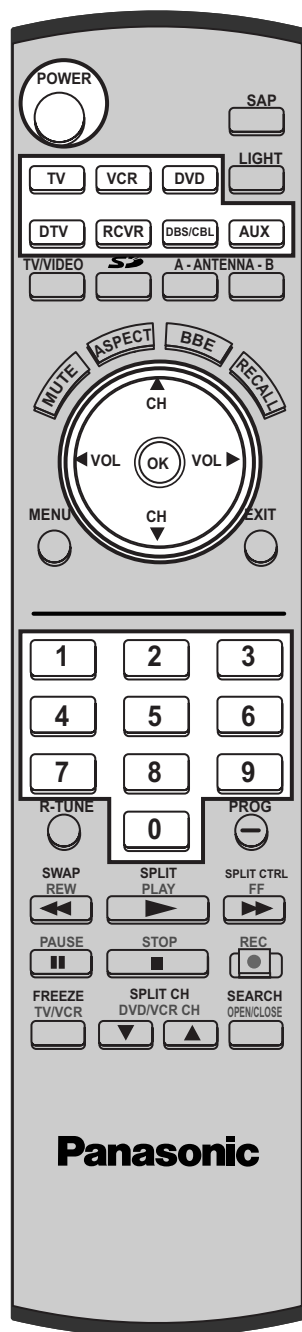
- If unit power is turned back on after performing the appropriate measures, make sure the unit has sufficiently cooled down. If the unit was used for a long period such that the lamp needs enough time to cool down, this may take a while.



# Remote Control Quick Reference Guide (Operating peripheral equipment)

## Programming The Remote

The Universal Remote Control can be programmed to operate many manufacturers' components, using the component function buttons for VCR, DVD, DTV, RCVR, DBS, CBL or AUX. Follow the procedures for programming your Remote Control with or without a code for the component.



Setting up the remote using the Number keys.

**(When code is known):**

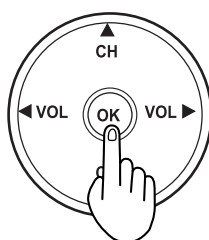
**1**



Confirm that the external component is plugged and operating. Turn the component off.

Press OK and POWER together, for at least 5 seconds.

+

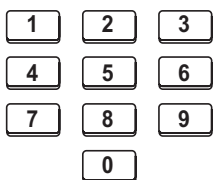


**2**



Press appropriate component button on the Remote Control VCR, DVD, DTV, RCVR, DBS/CBL or AUX (PVR or VCR2)

**3**



Enter the 3-digit component code using the Remote Control number keys (0 ~ 9 buttons). Press the Remote Control POWER to test the component. If the procedure was successful, the component will turn on.

Device	Operates	Default
<b>TV</b>	TV (Panasonic Only)	Panasonic Code
<b>VCR</b>	VCR (Preset)	Panasonic Code
<b>DVD/CD</b>	DVD and CD (Preset)	Panasonic Code
<b>DBS/CBL</b>	DBS STB & CBL STB (Preset) and Cable (Preset)	Panasonic DBS Code and Panasonic CABLE Code
<b>RCVR</b>	Audio Receiver (Preset)	Panasonic RCVR Code
<b>AUX</b>	Personal Video Recorders, Cassette and VCR2	Panasonic Personal Video Recorder Code
<b>DTV</b>	DTV (Panasonic Only)	Panasonic Only

### Notes:

- Determine the manufacturer of the component and look in the table for the code.
- If the component does not operate with the Remote Control, repeat the procedure using another code. (Some brands have multiple codes). If an incorrect code is entered, or if the procedure takes longer than 30 seconds, the programming will fail.

# Remote Control Quick Reference Guide (Operating peripheral equipment)

## Programming Without A Code

This procedure searches all codes and is called the "sequence method."



Setting to the remote using the step and set method

(When code is not known):

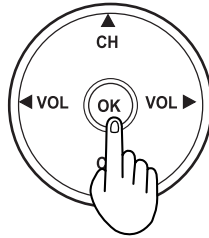
1



Confirm that the external component is plugged in and on. Turn the component off.

Press OK and POWER together, for at least 5 seconds.

+

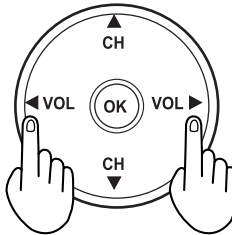


2



Press appropriate component button on the Remote Control.

3



Press VOL ► to move forward to the next code. Press VOL ◀ to move backward.

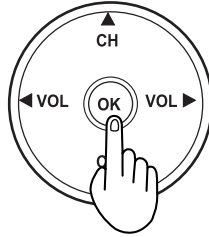
Press the Remote Control POWER to test the component. If the procedure was successful, the component will turn on.

### Note:

- Repeat the above steps until the component code is found. It may take many attempts before the correct code is found.

After the code is found, press **OK** to store the code.

4



## Component Codes

The Universal Remote Control is capable of operating many component brands after entering a code. Some components may not operate because the codes are not available due to limited memory. The Universal Remote Control does not control all features found in each model.

Write the code numbers from tables in this space. This will serve as a reference if you need to program your Remote Control.

### CABLE

Cable Box

### DBS

Digital Broadcast System

Other Component

### VCR

Video Cassette Recorder

### RCVR

Receiver or Amplifier

Other Component

### CD

Compact Disc Player

### DVD

Digital Versatile Player

Other Component



# Remote Control Quick Reference Guide (Operating peripheral equipment)

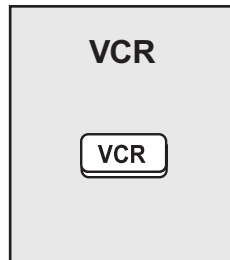
## Infrared Codes Index

The Remote Control is capable of operating many brands of peripheral equipment. Refer to page 75 and 76 for programming procedures.

### Notes:

- The Remote Control memory is limited and therefore some models may not operate. The Remote Control is not designed to control all features available in all models.
- After entering the proper infrared code, press the desired Mode Selection button on the Remote Control. Refer to page 8 to 9 and 80 to 81 for details on operating peripheral equipment using the Remote Control.

## VCR Infrared Codes Index



Codes For VCR	
Brand	Code
Admiral	335
Aiwa	332
Akai	314, 315, 316, 329
Audio Dynamic	311, 339
Bell & Howell	305, 313
Broksonic	320, 326
Canon	323, 325
CCE	343
Citizen	306
Craig	305, 306, 329
Curtis Mathes	324, 345
Daewoo	301, 324, 343
DBX	310, 311, 339
Dimensia	345
Emerson	303, 319, 320, 325, 326, 343
Fisher	305, 307, 308, 309, 313
Funai	320, 326, 334
GE	324, 333, 345
Goldstar	306
Gradiente	334
Hitachi	300, 323, 345
Instant Replay	323, 324
Jensen	339
JVC	310, 311, 334, 339
Kenwood	306, 310, 311, 339
LXI	300, 305, 306, 307, 308, 309
Magnavox	323, 324, 331
Marantz	310, 311, 339
Marta	306
Memorex	309, 324
MGA	338, 340, 341, 347, 348
Minolta	300, 345
Mitsubishi	338, 340, 341, 347, 348
Multitech	304, 347
NEC	310, 311, 334, 339
Olympic	323, 324

Codes For VCR (Contd.)	
Brand	Code
Optimus	306, 321, 328, 335
Orion	320, 326
Panasonic	321, 322, 323, 324
Penney	300, 305, 310, 311, 324, 339, 345
Pentax	300, 311, 345
Philco	320, 323, 324, 326, 331, 343
Philips	323, 324, 331
Pioneer	323
Proscan	300, 301, 302, 323, 324, 331, 333, 345, 346
Quasar	321, 322, 323, 324
Radio Shack	305, 309, 324, 333, 336, 340
RCA	300, 301, 302, 323, 324, 331, 333, 345, 346
Realistic	305, 309, 324, 336, 340
Samsung	302, 304, 333
Sansui	320, 326, 339, 352
Sanyo	305, 309, 313
Scott	301, 302, 304, 309, 320, 326, 338, 340, 347, 348
Sears	300, 305, 306, 307, 308
Sharp	335, 336
Shintom	317
Signature 2000	335
Singer	337
Sony	328, 329, 330
Sylvania	323, 324, 331
Tashiro	306
Tatung	310, 311, 339
Teac	310, 311, 339
Technics	321, 322, 323, 324
Teknika	324
Toshiba	301, 346
Vector Research	311
Wards	306, 309, 335, 336, 344
Yamaha	305, 310, 311, 339
Zenith	306, 344

# Remote Control Quick Reference Guide (Operating peripheral equipment)

## CABLE CONVERTER BOX AND DVD, CD PLAYERS Infrared Codes Index

### DBS/CBL

DBS/CBL

#### Codes For DBS

Brand	Code
Dish Network (Echostar)	105, 115, 116
Echostar	105
Express VU	105, 115
G. E.	106
G.I. (General Instrument)	108
Gradiente	114
Hitachi	103, 111, 112
HNS (Hughes)	103

#### Codes For DBS (Contd.)

Brand	Code
Magnavox	101, 102
Panasonic	104
Philips	101, 102
Primestar	108
Proscan	106, 109, 110, 113
RCA	106, 109, 110, 113
Sony	107
Star Choice	103, 108
Toshiba	100
Uniden	101, 102

#### Codes For Cable Box

Brand	Code
ABC	124
Archer	125, 132
Cableview	105, 132
Citizen	105, 122
Curtis	112, 113
Diamond	124, 125, 132
Eagle	129
Eastern	134
GCbrand	105, 132
Gemini	122
General Instrument/Jerrold	111, 119, 120, 121, 122, 124, 125, 126, 127
Hamlin	112, 118, 140, 141, 142, 145
Hitachi	103, 124
Macom	103, 104, 105
Magnavox	133
Memorex	130
Movietime	105, 132
Oak	102, 137, 139
Panasonic	109, 110, 114
Philips	106, 107, 128, 129, 130
Pioneer	101, 116
Pulsar	105, 132

#### Codes For Cable Box (Contd.)

Brand	Code
Puser	132
RCA	115
Realistic	132
Regal	112, 118, 140, 141, 142, 145, 149
Regency	134
Rembrandt	105, 132, 137
Samsung	105
Scientific Atlanta	111, 112, 113
Slmark	101, 105
Sprucer	105, 110
Stargate	105, 110
Teleview	101, 105
Texscan	144
Tocom	135
Toshiba	104
Unika	125, 232
Universal	122, 132
Videoway	106
Viewstar	129, 130
Zenith	100, 117
Zenith/Drake Satellite	100

### RCVR

RCVR

#### Codes For Receivers

Brand	Code
Admiral	120
Aiwa	125, 126
Denon	134, 135, 136
Fisher	104
Garrard	113
Harman Kardon	115, 123
Jensen	129
JVC	132, 133
Kenwood	100, 108
Magnavox	127
Marantz	124
McIntosh	116
Nakamichi	106
Onkyo	109, 114

#### Codes For Receivers (Contd.)

Brand	Code
Optimus	103, 127, 130, 131
Panasonic	118, 119, 121
Philips	123
Pioneer	105, 107
Quasar	118, 119, 121
RCA	103, 105, 127, 130, 131
Sansui	103, 111, 139
Sharp	134, 137
Sony	122
Soundesign	138
Teac	111, 112, 113
Technics	118, 119, 121
Victor	132, 133
Yamaha	101, 102

# Remote Control Quick Reference Guide (Operating peripheral equipment)

## CASSETTE PLAYERS, PERSONAL VIDEO RECORDERS, RECEIVERS, AMPLIFIERS, and DBS Infrared Codes Index

**AUX**

**AUX**

### Codes For Cassette Decks

Brand	Code
Aiwa	223, 224, 225
Denon	231
Fisher	203
Jensen	214
JVC	229, 230
Kenwood	200, 207
Marantz	202
Nakamichi	205
Onkyo	208, 209, 213
Panasonic	216, 218

### Codes For Cassette Decks (Contd.)

Brand	Code
Philips	222
Pioneer	204
RCA	226, 227, 228
Sansui	205, 210
Sharp	231
Sony	219, 220
Teac	210, 211, 215
Technics	216, 218
Yamaha	201, 202

### Codes For Personal Video Recorders

Brand	Code
Panasonic Replay TV	100
Philips Tivo	102
Sony Tivo	101

**DVD**

**DVD**

### Codes For DVD

Brand	Code
Denon	100
Ferguson	101
JVC	109
Mitsubishi	105
Nordmende	101
Panasonic	100
Philips	103
Pioneer	102
RCA	101

### Codes For DVD (Contd.)

Brand	Code
Saba	101
Samsung	110
Sharp	108
Sony	104
Technics	100
Thomson	101
Toshiba	103
Yamaha	100
Zenith	107

### Codes For CD Player

Brand	Code
Admiral	226
Aiwa	233, 235
Carver	229
Denon	242
Emerson	239
Fisher	205
Harman/ Kardon	219, 220, 221, 223
Hitachi	207
Jensen	234
JVC	240, 241, 245
Kardon	223
Kenwood	200, 201, 211, 245
LXI/Sears	236
Magnavox	229, 232
Marantz	229
McIntosh	221
Nakamichi	210
Onkyo	214, 215

### Codes For CD Player (Contd.)

Brand	Code
Optimus	208, 218, 220, 222
Panasonic	224, 225, 227
Philips	229, 230
Pioneer	208
Quasar	224, 225, 227
RCA	231, 237, 238, 247
Sansui	210, 246
Sanyo	205
Scott	210, 246
Sharp	242, 243
Sherwood	220
Sony	228
Soundesign	244
Teac	212, 216, 218
Technics	224, 225, 227
Victor	240, 241, 245
Yamaha	202, 203, 204

# Remote Control Quick Reference Guide (Operating peripheral equipment)












## Operating Components with Remote Control

### Note:

- Refer to pages 8-9 for programming Remote Control procedure.



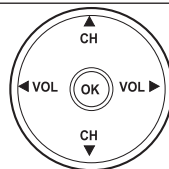
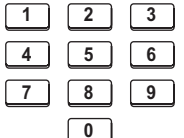




### Operating a VCR

Program the Remote Control to use with VCR.

TO DO THIS...	PRESS
Turn on/off	POWER 
Select TV Input mode for VCR	TV/VIDEO 
Change Channels up/down	SPLIT CH DVD/VCR CH 
Record	REC 
Play	SPLIT PLAY 
Stop	STOP 
Fast Forward	SPLIT CTRL FF 
Rewind the Tape	SWAP REW 
Pause	PAUSE 
Change to TV or VCR Mode	FREEZE TV/VCR 
On screen VCR Display	RECALL 


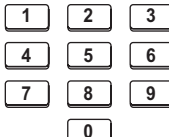
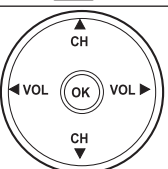

### Operating a DBS

Program the Remote Control to use with DBS.

TO DO THIS...	PRESS
Turn on/off	POWER 
Display DBS menu	OK 
Menu Navigation	
Select a Channel	1 2 3 4 5 6 7 8 9 0 
Program Information	RECALL 
Back to previous channel	R-TUNE 
Select next page up/down	SPLIT CH DVD/VCR CH 
Exit menus	EXIT 


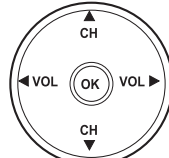








### Operating a CABLE BOX

Program the Remote Control to use with Cable Box.

TO DO THIS...	PRESS
Turn on/off	POWER 
Select a Channel	1 2 3 4 5 6 7 8 9 0 
Change Channels Up/Down	
Back to previous channel	R-TUNE 

### Operating a DVD

Program the Remote Control to use with DVD.

TO DO THIS...	PRESS
Turn on/off	POWER 
Next/Previous Chapter	
DVD Display	RECALL 
Skip Search Reverse	SWAP REW 
Skip Search Fast Forward	SPLIT CTRL FF 
Play	SPLIT PLAY 
DVD Open/Close	SEARCH OPEN/CLOSE 
Stop	STOP 
Still	PAUSE 
Slow +/-	FREEZE TV/VCR 

# Remote Control Quick Reference Guide (Operating peripheral equipment)

## Operating Components with Remote Control

### Operating a Cassette Deck

To operate a cassette deck, the Remote Control must be in AUX mode and be programmed with the appropriate code for your equipment.

TO DO THIS...	PRESS
Turn on/off	POWER
Receiver Volume Up/Down	
Deck A/B	R-TUNE
Record	REC
Play	SPLIT PLAY
Stop	STOP
Fast Forward	SPLIT CTRL FF
Rewind the Tape	SWAP REW
Pause	PAUSE

### Operating a Receiver

Program the Remote Control to operate audio receiver.

TO DO THIS...	PRESS
Turn on/off	POWER
Audio Mute	MUTE
RCVR. VOI Up Down	
Tuner Pre-set stations Up/Down	
To select AV Inputs or Components:	Press Remote Control Number keys AV1: Press 1 AV2: Press 2 AV3: Press 3 AV4: Press 4 CD: Press 5 TUNER: Press 6 PHONO: Press 7 TAPE: Press 8 AUX: Press 9

### Operating a Receiver

Program the remote to operate audio receiver.

TO DO THIS...	PRESS
Surround VOL Down	SWAP REW
Surround VOL UP	SPLIT CTRL FF
Center CH VOL Up/Down	SPLIT CH DVD/VCR CH

### Operating a PVR (Personal Video Recorder)

Program the Remote Control to use with a PVR.

TO DO THIS...	PRESS
Turn on/off	POWER
Display PVR menu	MENU
PVR Navigation	
Select a Channel	1 2 3 4 5 6 7 8 9 0
Play	SPLIT PLAY
Record	REC
Pause	PAUSE
Back to previous channel	R-TUNE
Exit menus	EXIT
Replay Zones	R-TUNE
Quick Skip	SEARCH OPEN/CLOSE
Return to live	PROG
PVR CH Up/Down	SPLIT CH DVD/VCR CH

### Notes:

- Not all functions listed may be controllable.
- Some TV, Cable Box and DSS Receiver brands require you to turn on the power manually.

# Troubleshooting

**Before you call for service, determine the symptoms and make a few simple checks as shown below.**

Symptoms		Checks	Page
Power does not turn ON.		• Is the power plug plugged in?	22
No picture even if the power is turned ON. LAMP indicator blinks red.		• Please replace lamp with a new one. Please consult your nearest dealer, if not still repaired.	73-74
The power turns OFF.	The POWER indicator flashes orange twice every 5 seconds.	• The lamp cover is ajar. Firmly replace the cover.	74
	The TEMP indicator flashes 2 or 4 times every 5 seconds.	• Check whether or not the vents are clogged.	74
	The TEMP indicator flashes 5 times every 5 seconds.	• Is the set being used in a location that is hot?	74
	Power turns off while another indicator is flashing.	• Please consult your nearest dealer.	74
Remote control does not function.		• Are the batteries dead or inserted incorrectly?	7
		• Is the remote control sensor in direct light of fluorescent lamps or other strong sources of light?	-
		• Did you correctly set the remote control code?	75
Image shakes.		• Is the antenna or antenna cable old, broken or shorted?	-
Image is not clear.		• Is the antenna cable connected properly?	12-14
		• Sudden changes in ambient temperature may cause condensation in the internal optics. Condensation should disappear after Power has been ON for a while.	-
Color patches or no color.		• When using a VCR and selecting channels on the TV, is the TV/VIDEO mode for the VCR set to TV?	-
Image appears doubled or tripled.		• Is the antenna facing the right direction?	-
		• Is the antenna receiving any signals reflected off of mountains or buildings.	-
Images disappear at the top and bottom of the screen.		• When using 16:9 image software, there is no picture at the top and bottom of the screen (cinema vision size software, etc.).	-
During ZOOM modes, the image is cut off at the top and bottom.		• Has the screen position been changed? If so, adjust screen positioning.	32-33, 40-41
Some parts of the screen are always lit while others do not light up. Some parts of the screen do not light up.		• This is a characteristic of the LCD panel and not a malfunction.	-
Fan is operating even though TV Power is OFF.		• This is because the cooling fan is operating. The fan will stop after about 1 minute.	22
An OSD instructing to replace the lamp is displayed. (The LAMP indicator is lit red.)		• Replace lamp with a new one.	73-74
Relighting the lamp when it is hot makes a sound.		• This is a characteristic of the lamp and not a malfunction.	-
Leaving stationary images, such as still video images, web pages, or filler bars (used for NORMAL aspect mode), on-screen for an extended period of time can leave ghost images on the screen.		• This is a characteristic of the LCD panel and not a malfunction. Try displaying constantly moving pictures which fill the entire screen, or turn the power OFF for a while to return the screen to normal.	-
An OSD advising "AIR FILTER CLEANING..." is displayed.		• Please consult your nearest dealer.	-
When a bright picture is displayed, stain-like blotches appear.		• This can occur if the ambient temperature changes suddenly. Try gently rubbing the stained areas with a soft cloth.	-

# Specifications

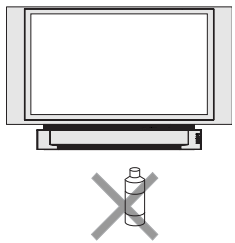
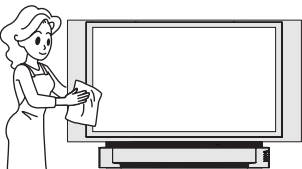
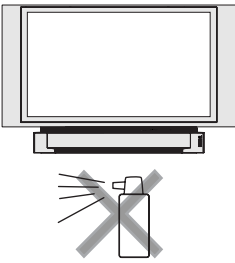

		PT-43LC14	PT-50LC14	PT-60LC14
Power Source		AC 120 V, 60 Hz		
Power Consumption		Power ON:        Approx. 220 W (When audio is at maximum) Power OFF:        Approx. 0.4 W (When cooling fan is stopped)		
LCD panels		0.7" Poly silicon TFT LCD panel x 3 921 600 (1 280 x 720) stripe pixels x 3 panels (16:9)		0.9" Poly silicon TFT LCD panel x 3 921 600 (1 280 x 720) stripe pixels x 3 panels (16:9)
Display		43-inch, 16 : 9 aspect ratio	50-inch, 16 : 9 aspect ratio	60-inch, 16 : 9 aspect ratio
Speaker		2 Speakers 30 W [15 W + 15 W ] (10 % THD)		
HID Lamp		100 W HID (High Intensity Discharge) Lamp		
Channel Capability		VHF-12 : UHF-56 : Cable-125		
Input Terminals	RGB INPUT (PT-43LC14) RGB INPUT 1-2 (PT-50LC14/PT-50LC14)	RGB analog        0.7 Vp-p (75 Ω) (D-SUB15P) AUDIO   0.5 Vrms (M3 Stereo mini Pin Jack)		
	AV INPUT 1-3	VIDEO                1.0 Vp-p (75 Ω) (RCA Pin Jack) S-VIDEO            Y : 1 Vp-p (75 Ω), C : 0.286 Vp-p (75 Ω) (Mini DIN 4 pin) AUDIO L-R        0.5 Vrms (RCA Pin Jack x 2)		
	COMPONENT VIDEO INPUT 1-4	Y                        1.0 Vp-p (with sync) (75 Ω) (Pin Jack) P <sub>B</sub> / P <sub>R</sub> ± 0.35 Vp-p (75 Ω) (Pin Jack x 2) AUDIO L-R        0.5 Vrms (RCA Pin Jack x 2)		
	HDMI	HDMI type A Connector AUDIO L-R        0.5 Vrms (RCA Pin Jack Type × 2)		
Card slot	SD Card slot	SD Card, MultiMediaCard		
	PC Card slot	Compact Flash, Smart Media, Memory Stick, xD Picture Card		
Output signals (AV OUT)		VIDEO                1.0 Vp-p (75 Ω) (RCA Pin Jack) AUDIO L-R        0.5 Vrms (RCA Pin Jack x 2)		
Dimensions ( W x H x D )		1 259 mm (W) x 795 mm (H) x 324 mm (D) 49-9/16" (W) x 31-5/16" (H) x 12-6/8" (D)	1 416 mm (W) x 897 mm (H) x 389 mm (D) 55-6/8" (W) x 35-5/16" (H) x 15-5/16" (D)	1 637 mm (W) x 1 050 mm (H) x 459 mm (D) 64-7/16" (W) x 41-3/8" (H) x 18-1/16" (D)
Weight (Mass)		31.3 kg (69 lbs.) Net	37.6 kg (82.9 lbs.) Net	46 kg (101.4 lbs.) Net
Operating conditions		Temperature : 0 °C – 35 °C (34 °F - 95 °F) Humidity : 20 % - 80 % (non-condensing)		

## Note:

- Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

# Cleaning

To ensure continued excellent performance by this product, periodic cleaning is recommended.

	<p>The unit contains many plastic parts. For this reason DO NOT use benzine, thinner or other chemicals to clean the unit.</p>		<p>Dust will accumulate on the picture screen. Please wipe with a soft cloth from time to time. If you use a chemically treated cloth, please be careful to follow the instructions that come with the cloth.</p>
	<p>DO NOT bring into contact with insecticide or other volatile substances. DO NOT allow the unit to come into contact for extended periods with rubber or vinyl products.</p>		<p>Remove dirt and soiling by wiping with a light cloth. Even if the unit is heavily soiled, do not apply cleaner directly to the unit. Soak a cloth in a solution of neutral cleanser diluted with water. Then wring out the cloth, wipe the unit clean, and finish by wiping with a dry cloth. Do not use any type of cleansers on the picture screen.</p>

## Customer Services Directory

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Servicenter; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

<http://www.panasonic.com/support>

or, contact us via the web at:

<http://www.panasonic.com/contactinfo>

You may also contact us directly at:

1-800-211-PANA (7262),

Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST.

For hearing or speech impaired TTY users, TTY : 1-877-833-8855

### Accessory Purchases

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

<http://www.pasc.panasonic.com>

or, send your request by E-mail to:

[npcparts@panasonic.com](mailto:npcparts@panasonic.com)

You may also contact us directly at:

1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday – Friday 9 am to 8 pm, EST.)

Panasonic Services Company

20421 84th Avenue South,

Kent, WA 98032

(We Accept Visa, MasterCard, Discover Card, American Express, and Personal Checks)

For hearing or speech impaired TTY users, TTY : 1-866-605-1277

#### Service in Puerto Rico

Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company

Factory Servicenter:

Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Phone (787)750-4300 Fax (787)768-2910

As of October 2003



# Limited Warranty

PANASONIC CONSUMER  
ELECTRONICS COMPANY, DIVISION  
OF MATSUSHITA ELECTRIC  
CORPORATION OF AMERICA  
One Panasonic Way  
Secaucus, New Jersey 07094

PANASONIC SALES COMPANY,  
DIVISION OF MATSUSHITA  
ELECTRIC OF PUERTO RICO, INC.,  
Ave. 65 de Infantería, Km. 9.5  
San Gabriel Industrial Park, Carolina,  
Puerto Rico 00985

## Panasonic Multimedia Projection Display Limited Warranty

### Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as “the warrantor”) will, for the length of the period indicated on the chart below, which starts with the date of original purchase (“warranty period”), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

CATEGORY	PARTS	LABOR	SERVICE
Multimedia Projection Display	One (1) Year	One (1) Year	In-Home or Carry-In

During the “Labor” warranty period there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must carry-in your product or arrange for in-home service during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold “as is”. A purchase receipt or other proof of the original purchase date is required for warranty service.

### Carry-in or In-Home Service

For In-Home or Carry-In Service in the United States call 1-888-VIEW-PTV (1-888-843-9788).

For assistance in Puerto Rico call Panasonic Sales Company (787)-750-4300 or fax (787)-768-2910.

In-Home service requires clear, complete and easy access to the product by the authorized servicer and does not include removal or re-installation of an installed product. It is possible that certain in-home repairs will not be completed in-home, but will require that the product, or parts of the product, be removed for shop diagnosis and/or repair and then returned.

### Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty also does not cover damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

**THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER “LIMITED WARRANTY COVERAGE”. THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.** (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, or travel to and from the servicer. The items listed are not exclusive, but are for illustration only.) **ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights, which vary, from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

**PARTS AND SERVICE (INCLUDING COST OF AN IN-HOME SERVICE CALL, WHERE APPLICABLE) WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.**

## Note

# Index

1 080 i.....	16, 19, 21
480 i.....	16, 19
480 p .....	16, 19, 21
720 p .....	16, 19, 21

## A

ASPECT button .....	9, 32
Auto shut off .....	31
AV out terminals .....	11

## B

BBE .....	43
Blocking Message .....	49

## C

Card Menu Screen .....	69
Channel up / down buttons (projection display) .....	10, 30
CH buttons (Remote Control).....	9, 30
Component signal input terminals .....	11

## D

DCF .....	68
-----------	----

## F

Freezing pictures .....	36
-------------------------	----

## H

HDMI Input Terminal .....	11, 20
HDMI position.....	35

## I

ID1 .....	58
Input 1, 2, 3 terminals .....	11

## J

JPEG .....	68
------------	----

## L

LAMP indicator .....	10, 74
Left screen.....	38
LIGHT button.....	9

## M

Main picture .....	38
MENU button.....	9, 24
MUTE button .....	9, 36

## N

Number keys .....	9, 31
-------------------	-------

## O

OK button .....	9, 24
-----------------	-------

## P

PC Card.....	69
POWER button/POWER indicator .....	10, 22, 30, 74
POWER button (Remote Control) .....	9, 22

## R

R-TUNE button .....	9
RECALL button .....	9, 31
Receivable Broadcast Types.....	37
Remote Control Sensor .....	10, 30
Reset User's Memory Functions .....	49
RGB positions .....	35
RGB cable .....	18
RGB IN terminals .....	11
Right screen .....	38

## S

SAP button .....	9, 37
SD Card.....	69
Sound mute .....	36
SVGA.....	19

## T

TEMP indicator .....	10, 74
TV/VIDEO button .....	9, 35

## U

Using stereo system .....	17
Using VCR.....	14

## V

VGA .....	19
VHF/UHF terminal.....	11
Volume +/- buttons (projection display) .....	10, 30
VOL buttons (Remote Control).....	9, 30

## X

XGA .....	19
-----------	----

## Y

Y, P <sub>B</sub> , P <sub>R</sub> .....	16
--	----

**Customer' Record**

The serial number of this product can be found on its back cover. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number

Serial Number

**Panasonic Consumer Electronics Company, Division  
of Matsushita Electric Corporation of America**  
One Panasonic Way Secaucus New Jersey 07094

**Panasonic Sales Company, Division of Matsushita  
Electric of Puerto Rico Inc. ("PSC")**  
Ave. 65 de Infanteria, Km 9.5 San Gabriel Industrial Park,  
Carolina, Puerto Rico 00985

# IMPORTANT NOTICE!

(Please keep this notice for future reference.)

Your Multimedia Projection Display TV uses a special lamp to produce the picture. This lamp is a consumable item and can easily be replaced by the user.

## Determining if the lamp needs replacement

- No picture even if the power is turned ON.
- LAMP indicator blinks red (note: the LAMP indicator is located in front of the TV just below the screen).

## ORDER Replacement Lamp (Part No: TY-LA1000)

If the lamp needs to be replaced within the TV's warranty (1 year from date of purchase), you can obtain the replacement lamp free by calling toll-free at 1-800-332-5368. Please be ready with the Serial No. of your TV (printed on the label at the back).

If the lamp needs to be replaced after the TV's warranty, you can buy the lamp by calling toll-free at 1-800-332-5368.

## REPLACING Lamp

Replacing the LAMP is easy that you can do it yourself.  
Please refer to the instructions enclosed with the replacement lamp.

(LSQL1640)

By choosing this ENERGY STAR® qualified product with the latest energy-saving technology, you're helping to preserve our environment for future generations. And for that, we're mighty grateful.

In addition to electronics, the ENERGY STAR is featured on more than 35 product categories for the home. For more information, visit [www.energystar.gov](http://www.energystar.gov).

Did you know that you can also reuse or recycle many of your old home electronics? To learn more, go to [www.plugintorecycling.org](http://www.plugintorecycling.org).

Please note that the EPA cannot endorse the purchase of specific commercial products.  
Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper



If all home electronics sold in the US this year were ENERGY STAR, we would reduce air pollution equivalent to taking over 350,000 cars off the road.

Products that earn the ENERGY STAR prevent greenhouse gas emissions by meeting strict energy efficiency guidelines set by the US Environmental Protection Agency and the US Department of Energy.  
[www.energystar.gov](http://www.energystar.gov)



**CHANGE FOR THE  
BETTER WITH  
ENERGY STAR**

thank you.





# Panasonic Product Registration

## THREE IMPORTANT REASONS

to register your new purchase immediately:

### 1. Protect Your New Investment

Register your new product for insurance purposes in case it is lost or stolen.

### 2. Product Safety Notification

Registering your product can help us to contact you in the unlikely event a safety notification is required under the Consumer Product Safety Act.

### 3. Improved Product Development

Help us continue to design products that meet your needs.

*See details inside...*

Send this card by mail or register via the Internet at:

**<http://www.panasonic.com/register>**





**Please send products and other  
correspondence to:**

Panasonic Consumer Affairs  
Panasonic Consumer Electronics Company  
A Division of Matsushita Electric Corporation of America  
One Panasonic Way, 2F-3  
Secaucus, NJ 07094



First-Class  
Postage  
Required  
Post Office will  
not deliver  
without proper  
postage.

**M V N 0 1 - 0 1**

**PANASONIC CONSUMER  
ELECTRONICS COMPANY  
PO BOX 174287  
DENVER CO 80217-4287**



Panasonic

Important! Please complete and return within ten days.

You can also register online via the Internet at:

http://www.panasonic.com/register

It is not necessary to return this card in order to effectuate the limited warranty.

M V N 0 1 - 0 1  
LCD Multimedia Projection Display

1. 1. ☐ Mr. 2. ☐ Mrs. 3. ☐ Ms. 4. ☐ Miss  
First Name Initial Last Name

Street

Apt. No.

City

State

ZIP Code

2. E-mail Address:

3. Telephone number:  
( ) -

4. Date of purchase: / /  
Month Day Year

5. A. Model #: (refer to operating manual or box)

B. Serial #: (refer to the product)

6. Name of store where purchased:

City

State

or website address if purchased via the internet:

7. Price paid (excluding service contract, shipping and taxes): \$ .00

8. Did you purchase or receive an extended service contract with your product?  
1. ☐ Yes 2. ☐ No

9. Is this product:  
1. ☐ The first LCD Multimedia Projection Display you've ever purchased?  
2. ☐ A replacement for another LCD Multimedia Projection Display?  
3. ☐ An additional product (already own one other LCD Multimedia Projection Display)?  
4. ☐ An additional product (already own two or more other LCD Multimedia Projection Display)?

10. What were the most important factors that influenced your selection of this product? (check up to 2 responses)  
01. ☐ Trust in Panasonic 07. ☐ Ease of operation  
02. ☐ Quality 08. ☐ Salesperson's recommendation  
03. ☐ Features 09. ☐ Friend/Family recommendation  
04. ☐ Price 10. ☐ Online research  
05. ☐ Size 11. ☐ Warranty  
06. ☐ Appearance/Design 12. ☐ Other

11. What were the most important features that influenced your selection of this product? (check up to 3 responses)  
01. ☐ HDTV/EDTV Display Capability (1080i, 720p, 480p)  
02. ☐ PC Display Capability (VGA, SVGA and XGA)  
03. ☐ SD Memory Card/PC Card Slot  
04. ☐ 16:9 Aspect Ratio with Selectable 4:3 Scan Mode  
05. ☐ Motion-Adaptive 3D-Y/C Digital Comb Filter  
06. ☐ 2-Tuner Picture-in-Picture with Split-Screen Display  
07. ☐ 1280 x 720 Pixels Resolution  
08. ☐ Anti-Glare Screen  
09. ☐ Video Noise Reduction  
10. ☐ SonicPath™ Audio System (15W x 2 Speakers)  
11. ☐ BBE® Hi Definition Sound  
12. ☐ Input Jacks: 3 Sets of A/V (1 front), 3 S-Video (1 front) 2 RGB, (D-sub 15), 2 PC Audio, 1 RF  
13. ☐ Output Jacks: 1 set of Fixed Audio, 1 S-Video  
14. ☐ DIGITAL In Connectivity  
15. ☐ ATSC Tuner

12. Which of the following brands did you seriously consider before selecting Panasonic? (check all that apply)  
01. ☐ Did not consider any other brands 08. ☐ RCA  
02. ☐ Fujitsu 09. ☐ Samsung  
03. ☐ Hitachi 10. ☐ Sharp  
04. ☐ JVC 11. ☐ Sony  
05. ☐ Mitsubishi 12. ☐ Toshiba  
06. ☐ Philips 13. ☐ Other  
07. ☐ Pioneer

13. Excluding this purchase, what other electronics equipment do you currently own or intend to purchase?

	(A) If you Currently own	(B) If it's Panasonic or Technics	(C) Intend to buy in next 6 months
TV/DVD Combination .....	<input type="checkbox"/>	01. <input type="checkbox"/>	01. <input type="checkbox"/>
TV/VCR Combination .....	<input type="checkbox"/>	02. <input type="checkbox"/>	02. <input type="checkbox"/>
27" or Larger Color TV.....	<input type="checkbox"/>	03. <input type="checkbox"/>	03. <input type="checkbox"/>
Projection TV.....	<input type="checkbox"/>	04. <input type="checkbox"/>	04. <input type="checkbox"/>
Digital TV.....	<input type="checkbox"/>	05. <input type="checkbox"/>	05. <input type="checkbox"/>
Plasma TV .....	<input type="checkbox"/>	06. <input type="checkbox"/>	06. <input type="checkbox"/>
LCD TV .....	<input type="checkbox"/>	07. <input type="checkbox"/>	07. <input type="checkbox"/>
Digital Camcorder.....	<input type="checkbox"/>	08. <input type="checkbox"/>	08. <input type="checkbox"/>
Digital Camera.....	<input type="checkbox"/>	09. <input type="checkbox"/>	09. <input type="checkbox"/>
Digital Satellite System.....	<input type="checkbox"/>	10. <input type="checkbox"/>	10. <input type="checkbox"/>
DVD Video Player (excluding PC DVD) .....	<input type="checkbox"/>	11. <input type="checkbox"/>	11. <input type="checkbox"/>
DVD Video Recorder (excluding PC DVD) .....	<input type="checkbox"/>	12. <input type="checkbox"/>	12. <input type="checkbox"/>
DVD Audio System.....	<input type="checkbox"/>	13. <input type="checkbox"/>	13. <input type="checkbox"/>
Dolby Digital Receiver (AC-3).....	<input type="checkbox"/>	14. <input type="checkbox"/>	14. <input type="checkbox"/>
Home Theater System.....	<input type="checkbox"/>	15. <input type="checkbox"/>	15. <input type="checkbox"/>
MP3 Player.....	<input type="checkbox"/>	16. <input type="checkbox"/>	16. <input type="checkbox"/>
900MHz or 2.4 GHz Cordless Phone .....	<input type="checkbox"/>	17. <input type="checkbox"/>	17. <input type="checkbox"/>
Fax Machine .....	<input type="checkbox"/>	18. <input type="checkbox"/>	18. <input type="checkbox"/>
Home Computer .....	<input type="checkbox"/>	19. <input type="checkbox"/>	19. <input type="checkbox"/>
Personal Digital Assistant.....	<input type="checkbox"/>	20. <input type="checkbox"/>	20. <input type="checkbox"/>
Microwave Oven.....	<input type="checkbox"/>	21. <input type="checkbox"/>	21. <input type="checkbox"/>

14. Your date of birth: / /  
Month Year

15. Marital status: 1. ☐ Married 2. ☐ Single

16. Not including yourself, what is the GENDER and AGE (in years) of children and other adults living in your household?  
1. ☐ No one else in household 2. ☐ Child under 1 year  
Male Female Age Male Female Age  
1. ☐ 2. ☐ yrs. 1. ☐ 2. ☐ yrs.  
1. ☐ 2. ☐ yrs. 1. ☐ 2. ☐ yrs.

17. Occupation: (check all that apply) You Spouse  
Professional/Technical..... ☐ 1. ☐  
Upper Management/Executive..... ☐ 2. ☐  
Middle Management..... ☐ 3. ☐  
Sales/Marketing..... ☐ 4. ☐  
Clerical/Service Worker..... ☐ 5. ☐  
Tradesman/Machine Operator/Laborer..... ☐ 6. ☐

18. Are you or your spouse You Spouse  
A Homemaker?..... ☐ 1. ☐  
Retired?..... ☐ 2. ☐  
A Student?..... ☐ 3. ☐  
Self Employed/Business Owner?..... ☐ 4. ☐  
Working from a Home Office?..... ☐ 5. ☐  
In the Military?..... ☐ 6. ☐  
A Federal Employee?..... ☐ 7. ☐

19. Which group describes your annual family income?  
01. ☐ Under \$15,000 08. ☐ \$75,000-\$99,999  
02. ☐ \$15,000-\$19,999 09. ☐ \$100,000-\$124,999  
03. ☐ \$20,000-\$29,999 10. ☐ \$125,000-\$149,999  
04. ☐ \$30,000-\$39,999 11. ☐ \$150,000-\$174,999  
05. ☐ \$40,000-\$49,999 12. ☐ \$175,000-\$199,999  
06. ☐ \$50,000-\$59,999 13. ☐ \$200,000-\$249,999  
07. ☐ \$60,000-\$74,999 14. ☐ \$250,000 & over

20. Level of education: (check highest level completed)  
1. ☐ Completed High School 3. ☐ Completed Graduate School  
2. ☐ Completed College

21. Which credit cards do you use regularly?  
1. ☐ American Express, Diners Club 3. ☐ Dept. Store, Oil Company, etc.  
2. ☐ MasterCard, Visa, Discover 4. ☐ Do not use credit cards

22. For your primary residence, do you: 1. ☐ Own? 2. ☐ Rent?

23. Which of the following do you plan to do within the next 6 or 12 months?  
1-6 Months 7-12 Months  
Get Married..... ☐ 1. ☐  
Have a Baby..... ☐ 2. ☐  
Buy a House..... ☐ 3. ☐  
Remodel a Home..... ☐ 4. ☐  
Move to a New Residence..... ☐ 5. ☐  
Buy a Personal Computer..... ☐ 6. ☐  
Buy/Lease a New Vehicle..... ☐ 7. ☐  
Buy/Lease a Used Vehicle..... ☐ 8. ☐

(PLEASE CONTINUE ON BACK) > > >

**24. Please check all that apply to your household.**

- |   |  |  |  |
|---|--|--|--|
| 01. <input type="checkbox"/> Shop by Catalog/Mail             | 04. <input type="checkbox"/> Own a Compact Disc Player | 08. <input type="checkbox"/> Subscribe to an Online/Internet Service | 10. <input type="checkbox"/> Own an Apple/Macintosh Computer |
| 02. <input type="checkbox"/> Member of Frequent Flyer Program | 05. <input type="checkbox"/> Have a Dog                | 09. <input type="checkbox"/> Own an IBM or Compatible Computer       | 11. <input type="checkbox"/> Own a CD-Rom                    |
| 03. <input type="checkbox"/> Donate to Charitable Causes      | 07. <input type="checkbox"/> Own a Cellular Phone      |  |  |

**25. To help us understand our customers' lifestyles, please indicate the interests and activities in which *you or your spouse* enjoy participating on a regular basis.**

- |  |   |   |  |
|--|---|---|--|
| 01. <input type="checkbox"/> Bicycling                 | 14. <input type="checkbox"/> Needlework/Knitting/Sewing   | 27. <input type="checkbox"/> Health/Natural Foods           | 40. <input type="checkbox"/> Real Estate Investments       |
| 02. <input type="checkbox"/> Golf                      | 15. <input type="checkbox"/> Flower Gardening             | 28. <input type="checkbox"/> Photography                    | 41. <input type="checkbox"/> Stocks/Bonds/Mutual Funds     |
| 03. <input type="checkbox"/> Physical Fitness/Exercise | 16. <input type="checkbox"/> Vegetable Gardening          | 29. <input type="checkbox"/> Attending Cultural/Arts Events | 42. <input type="checkbox"/> Entering Sweepstakes          |
| 04. <input type="checkbox"/> Running/Jogging           | 17. <input type="checkbox"/> Crafts                       | 30. <input type="checkbox"/> Fashion Clothing               | 43. <input type="checkbox"/> Casino Gambling               |
| 05. <input type="checkbox"/> Snow Skiing               | 18. <input type="checkbox"/> Buy Prerecorded Videos       | 31. <input type="checkbox"/> Fine Art/Antiques              | 44. <input type="checkbox"/> Science Fiction               |
| 06. <input type="checkbox"/> Tennis                    | 19. <input type="checkbox"/> Automotive Work              | 32. <input type="checkbox"/> Foreign Travel                 | 45. <input type="checkbox"/> Wildlife/Environmental Issues |
| 07. <input type="checkbox"/> Camping/Hiking            | 20. <input type="checkbox"/> Electronics                  | 33. <input type="checkbox"/> Cruise Ship Vacations          | 46. <input type="checkbox"/> Dieting/Weight Control        |
| 08. <input type="checkbox"/> Fishing                   | 21. <input type="checkbox"/> Home Workshop/Do-It-Yourself | 34. <input type="checkbox"/> Travel in USA                  | 47. <input type="checkbox"/> Science/New Technology        |
| 09. <input type="checkbox"/> Hunting/Shooting          | 22. <input type="checkbox"/> Recreation Vehicles          | 35. <input type="checkbox"/> Gourmet Cooking/Fine Foods     | 48. <input type="checkbox"/> Self-Improvement              |
| 10. <input type="checkbox"/> Horseback Riding          | 23. <input type="checkbox"/> Listen to Records/Tapes/CDs  | 36. <input type="checkbox"/> Wines                          | 49. <input type="checkbox"/> Walking for Health            |
| 11. <input type="checkbox"/> Powerboating              | 24. <input type="checkbox"/> Surf the Internet            | 37. <input type="checkbox"/> Coin/Stamp Collecting          | 50. <input type="checkbox"/> Watching Sports on TV         |
| 12. <input type="checkbox"/> Sailing                   | 25. <input type="checkbox"/> Avid Book Reading            | 38. <input type="checkbox"/> Collectibles/Collections       | 51. <input type="checkbox"/> Home Video Recording          |
| 13. <input type="checkbox"/> Grandchildren             | 26. <input type="checkbox"/> Bible/Devotional Reading     | 39. <input type="checkbox"/> Our Nation's Heritage          | 52. <input type="checkbox"/> Moneymaking Opportunities     |

**26. Using the numbers in the above list, please indicate your 3 most important activities:**

Thanks for taking the time to fill out this questionnaire. Your answers will be used for market research studies and reports. They will also allow you to receive important mailings and special offers from a number of fine companies whose products and services relate directly to the specific interests, hobbies, and other information indicated above. Through this selective program, you will be able to obtain more information about activities in which you are involved and less about those in which you are not. Please check here if, for some reason, you would prefer *not* to participate in this opportunity. ☐

Please check here if you do not want to receive mailings and offers from Panasonic using your E-mail address. ☐

**Send any correspondence about our product to:**  
**Panasonic Consumer Affairs, Panasonic Consumer Electronics Company,**  
**A Division of Matsushita Electric Corporation of America, One Panasonic Way, Secaucus, NJ 07094**

Copyright © 2003 All Rights Reserved.

Printed in Indonesia

Part # LSQA0188A

Please seal with tape. Do not staple.